

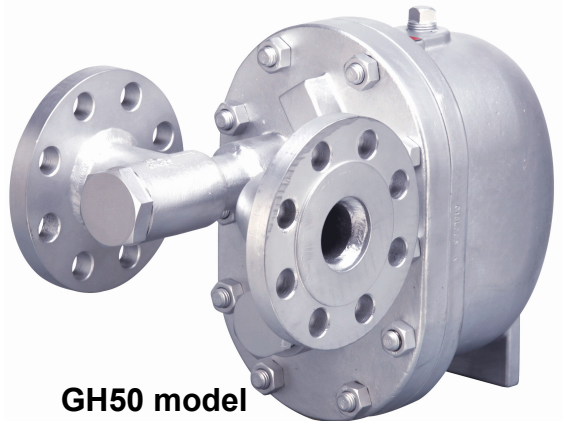
**DOUBLE-PORTED BALANCE-VALVE
BALL FLOAT STEAM TRAP**

GH40/50/60/70

USER'S MANUAL



GH40 model



GH50 model



GH60 model



GH70 model

SAFETY GUIDE

The model GH40/GH50/GH60/GH70 is a cast steel ball float steam trap with an integrated bimetal automatic air vent (GH40D/GH50D/GH60D/GH70D: Diaphragm type).

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	9
4. MAINTENANCE	12
5. TROUBLESHOOTING	25
6. WARRANTY	26
7. SERIAL NUMBER (S. No.) DESIGNATION	27
8. GUIDANCE FOR READING SPECIAL PRODUCT NAME	28

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 each item to avoid misuse of the product.

- (1) Maximum allowable pressure (PMA): 4.0 MPa (40 bar/580 psig)
- (2) Maximum allowable temperature (TMA): 400°C (752°F)
- (3) Maximum operating pressure (PMO):
 - GH40-2F/GH40D-2F/GH40-2W/GH40D-2W/GH50-2F/GH50-2D/GH50D-2F/GH50D-2W: 0.2 MPa (2 bar/29 psig)
 - GH40-6F/GH40D-6F/GH40-6W/GH40D-6W/GH50-6F/GH50D-6F/GH50-6W/GH50D-6W: 0.6 MPa (6 bar/87 psig)
 - GH40-10F/GH40D-10F/GH40-10W/GH40D-10W/GH50-10F/GH50D-10F/GH50-10W/GH50D-10W: 1.0 MPa (10 bar/145 psig)
 - GH40-21F/GH40D-21F/GH40-21W/GH40D-21W/GH50-21F/GH50D-21F/GH50-21W/GH50D-21W: 2.1 MPa (21 bar/305 psig)
 - GH40-32F/GH40-32W/GH50-32F/GH50-32W: 3.2 MPa (32 bar/464 psig)
 - GH60-2F/GH60D-2F: 0.2MPa (2 bar/29psig)
 - GH60-6F/GH60D-6F: 0.6MPa (6 bar/87psig)
 - GH60-10F/GH60D-10F: 1.0MPa (10 bar/145psig)
 - GH60-21F/GH60D-21F: 2.1MPa (21 bar/305psig)
 - GH70-21F/GH70D-21F: 2.1MPa (21 bar/305psig)
- (4) Maximum operating temperature (TMO):
 - GH40/GH50/GH60/GH70 : 400°C (752°F) ,
 - GH40D/GH50D/GH60D/GH70D : 220°C (428°F)
- (5) Size:
 - GH40/GH50 : 40mm (1-1/2"/DN40), 50mm (2"/DN50)
 - GH60 : 50mm (2"/DN50), 65mm (2-1/2"/DN65)
 - GH70 : 80mm (3"/DN80), 100mm (4"/DN100)
- (6) Serial number: Showing the year and date of production
- (7) Flow direction: Shown by an arrow.
- (8) Body material: Cast Steel SCPH2
- (9) Model symbol: Showing the product model name

For more details regarding dimensions and other specifications, refer to the catalog.

Classification according to PED 2014/68/EU

Fluid group 2 gases

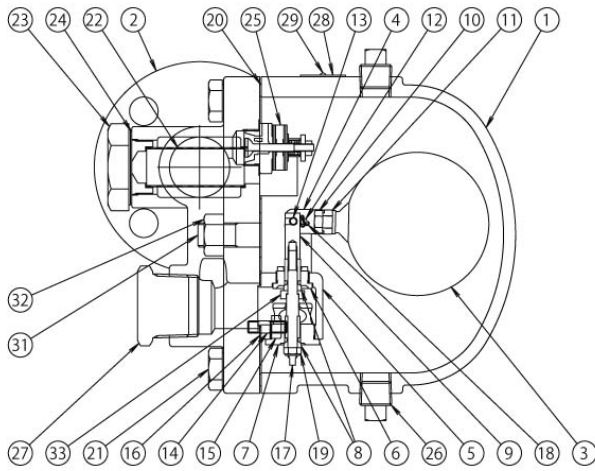
Classification: Category I or II additionally marked as follows.



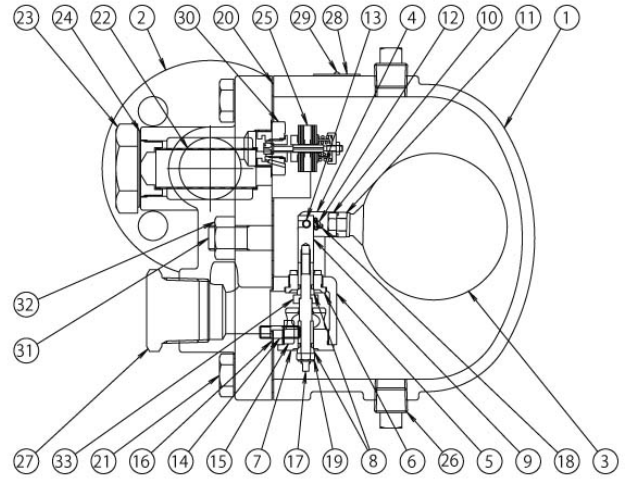
2 CONSTRUCTION DETAILS

GH40 model

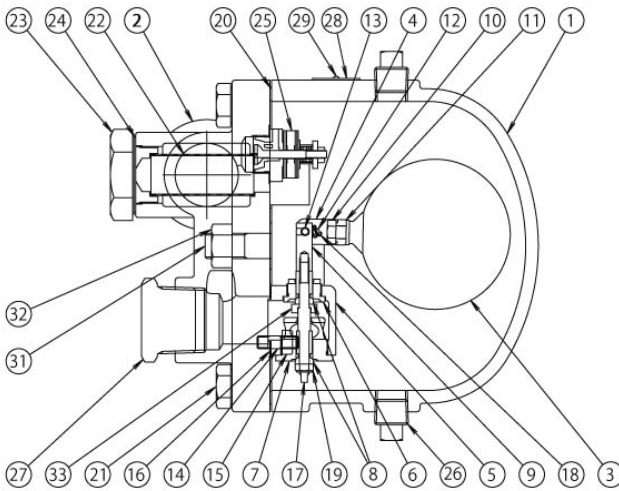
GH40-2/-6/-10/-21F models



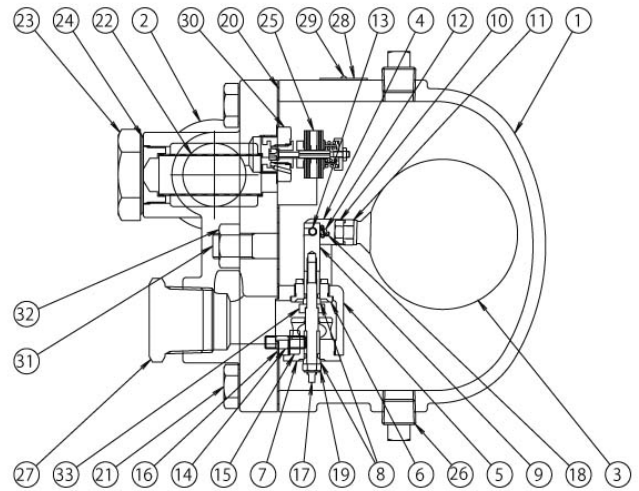
GH40-32F model



GH40-2/-6/-10/-21W models



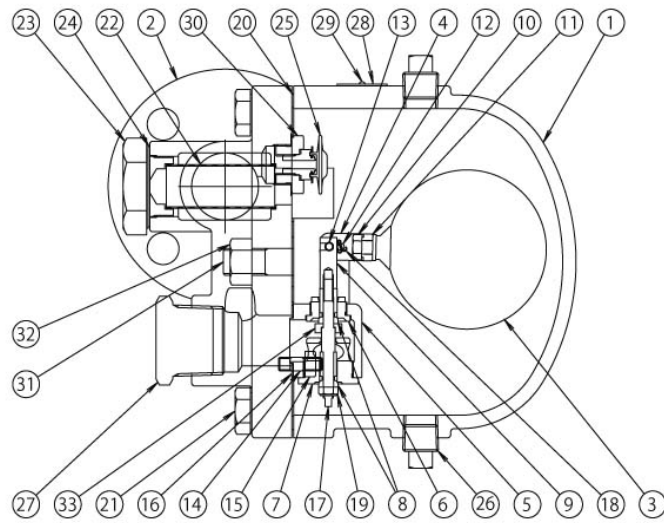
GH40-32W model



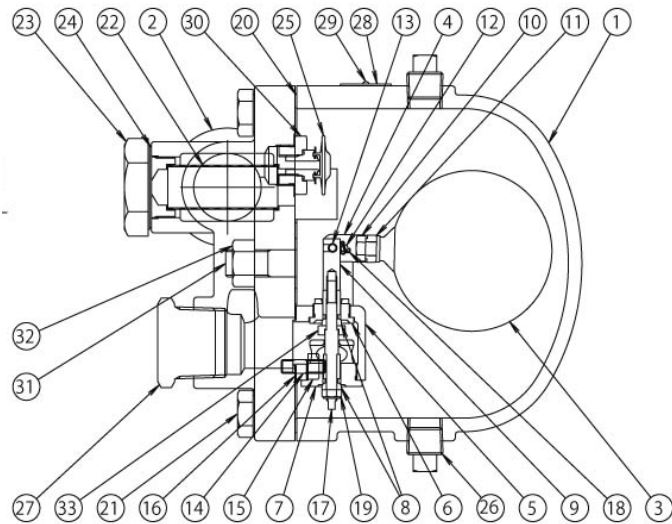
- | | | |
|-------------------|-------------------|---------------------------------------|
| 1. Body | 12. Pin | 23. Screen plug |
| 2. Cover | 13. Pin | 24. Screen plug gasket |
| 3. Float | 14. Holder bolt | 25. Air vent |
| 4. Lever | 15. Holder nut | 26. Plug |
| 5. Holder | 16. Holder gasket | 27. Plug |
| 6. Valve seat | 17. Shaft | 28. Name plate |
| 7. Valve seat | 18. Split pin | 29. Rivet |
| 8. Valve | 19. U-nut | 30. Bush (Only for the GH40-32 model) |
| 9. Lever nut | 20. Cover gasket | 31. Bolt |
| 10. Bolt | 21. Cover bolt | 32. Cover nut |
| 11. Spring washer | 22. Screen | 33. Collar |

GH40D models

GH40D-2/-6/-10/-21F models



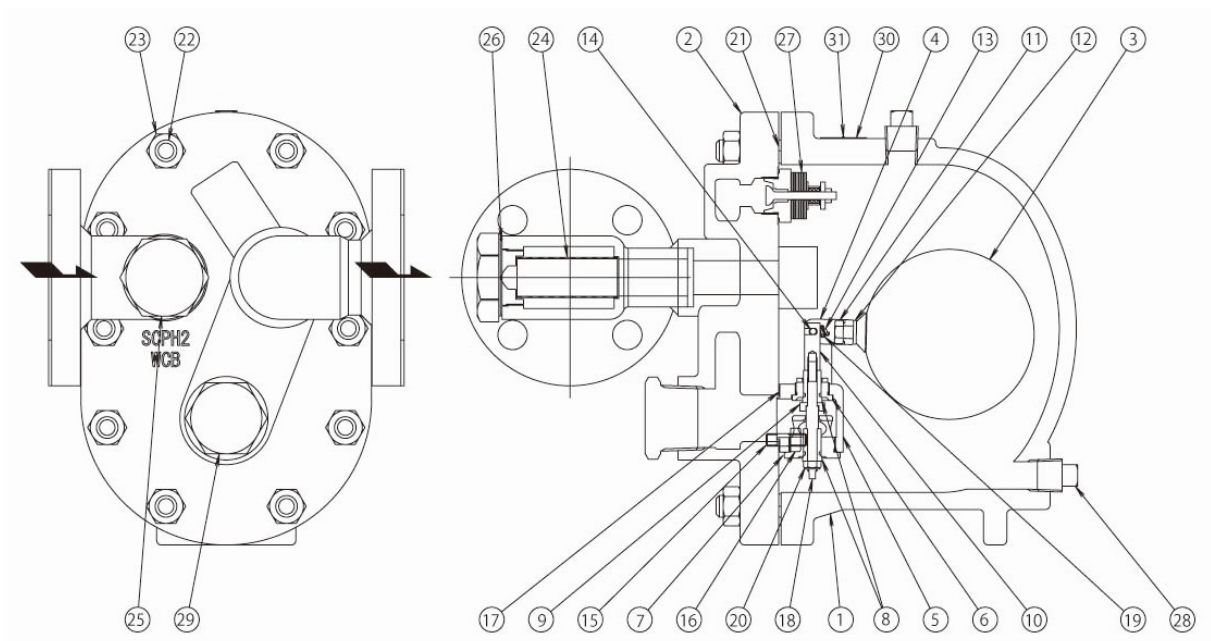
GH40D-2/-6/-10/-21W models



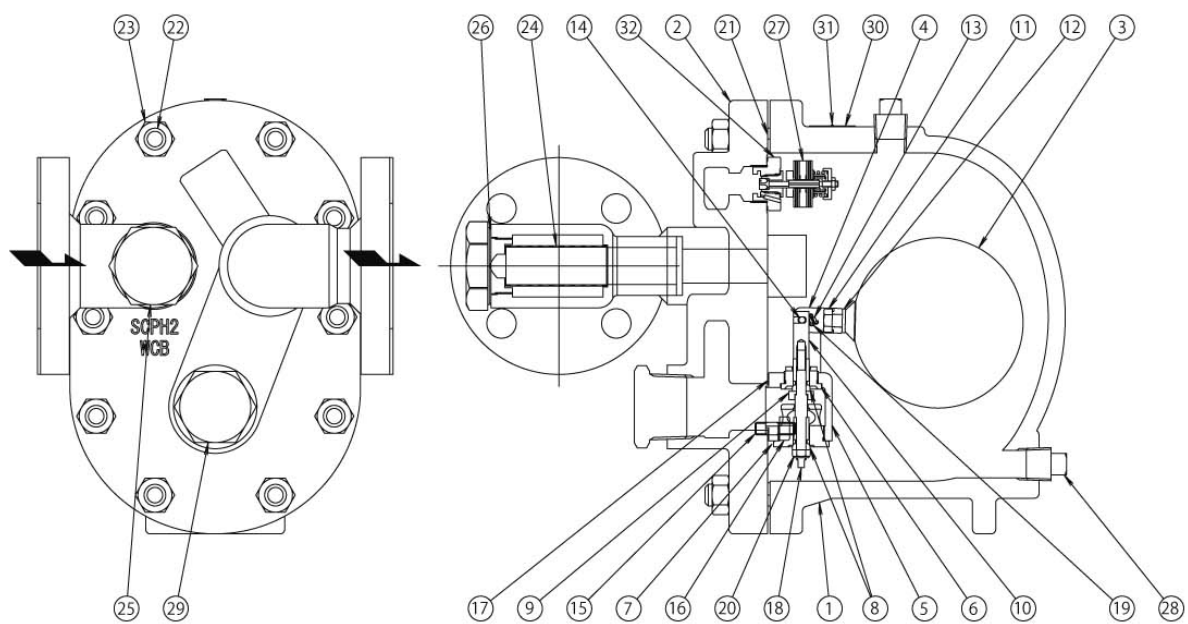
- | | | |
|-------------------|-------------------|------------------------|
| 1. Body | 12. Pin | 23. Screen plug |
| 2. Cover | 13. Pin | 24. Screen plug gasket |
| 3. Float | 14. Holder bolt | 25. Air vent |
| 4. Lever | 15. Holder nut | 26. Plug |
| 5. Holder | 16. Holder gasket | 27. Plug |
| 6. Valve seat | 17. Shaft | 28. Name plate |
| 7. Valve seat | 18. Split pin | 29. Rivet |
| 8. Valve | 19. U-nut | 30. Bush |
| 9. Lever nut | 20. Cover gasket | 31. Bolt |
| 10. Bolt | 21. Cover bolt | 32. Cover nut |
| 11. Spring washer | 22. Screen | 33. Collar |

GH50 model

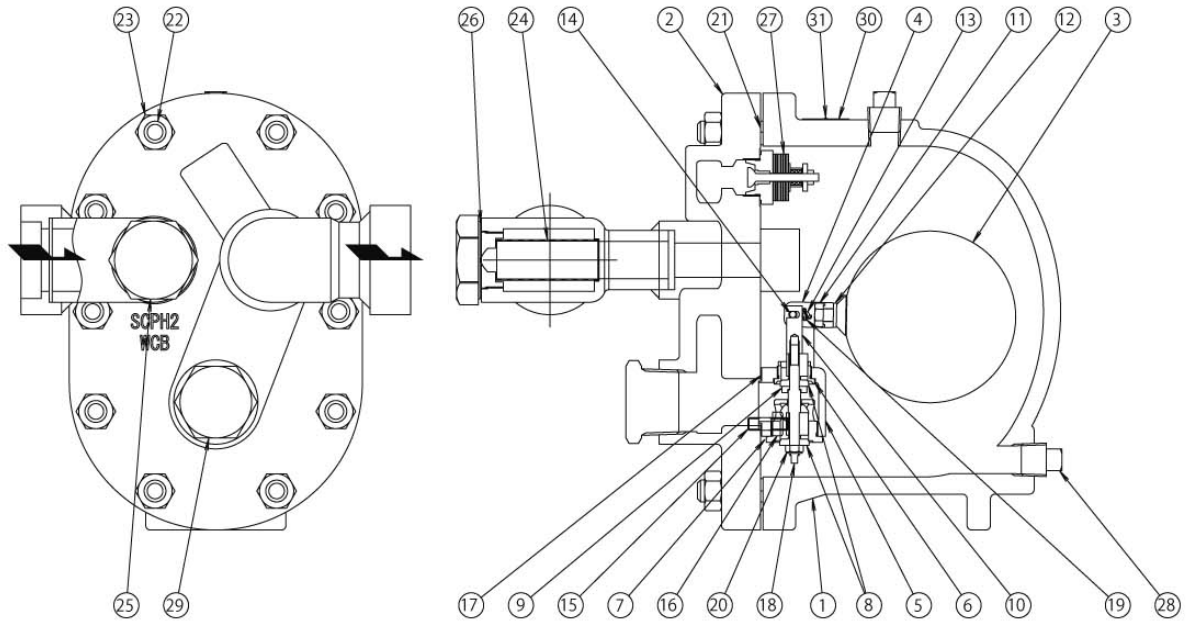
GH50-2/-6/-10/-21F models



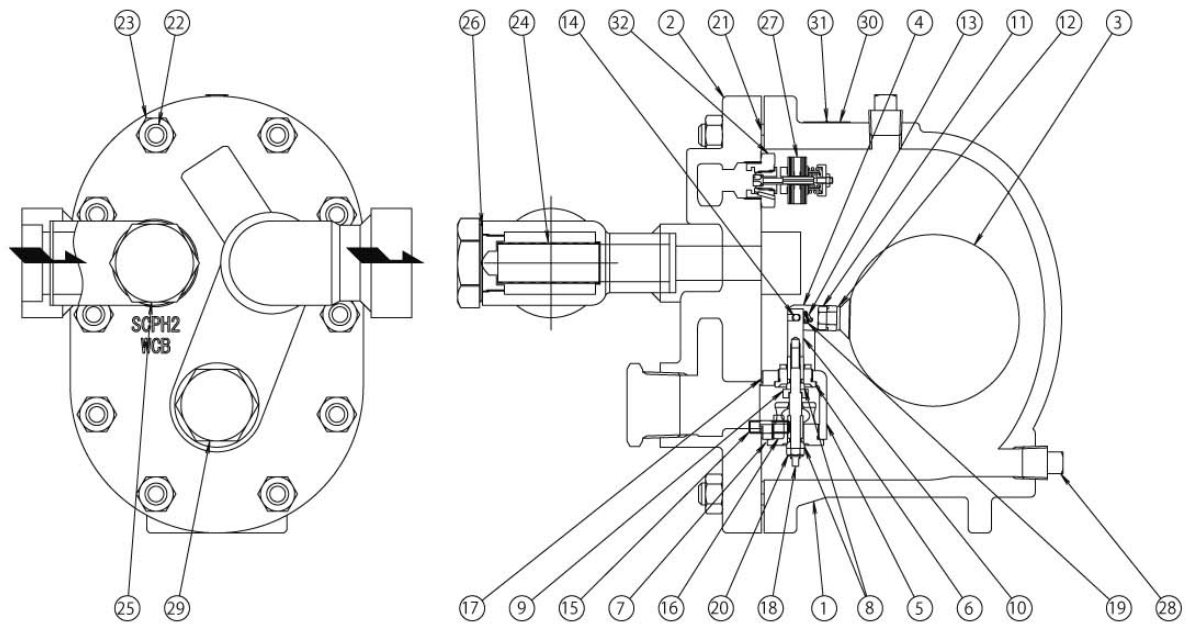
GH50-32F model



GH50-2/-6/-10/-21W models

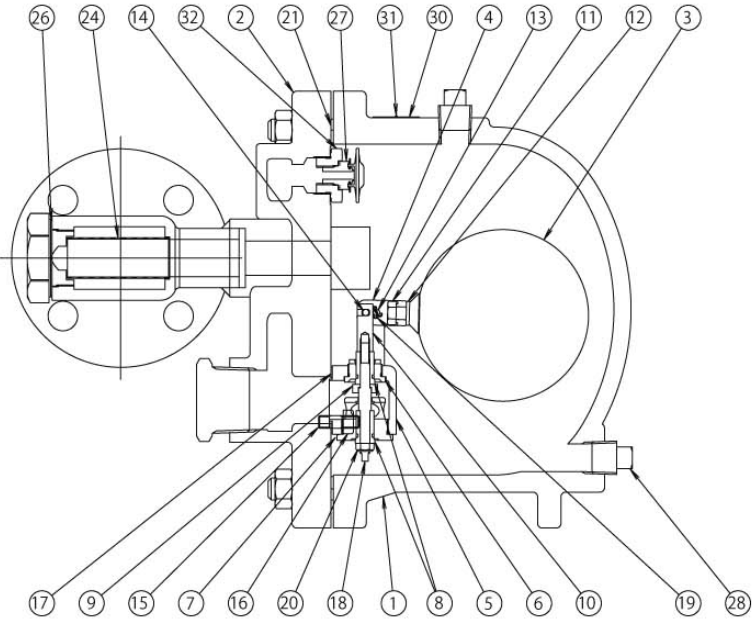
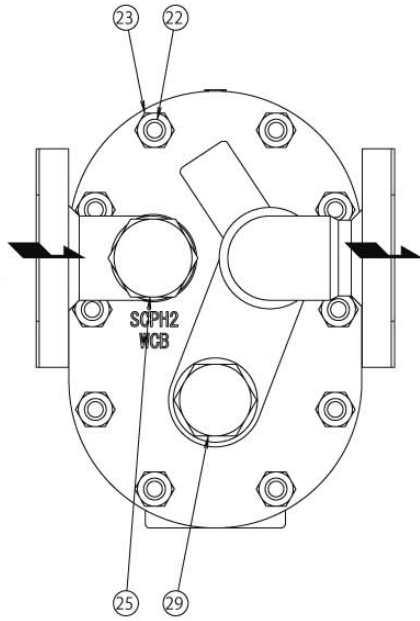


GH50-32W model

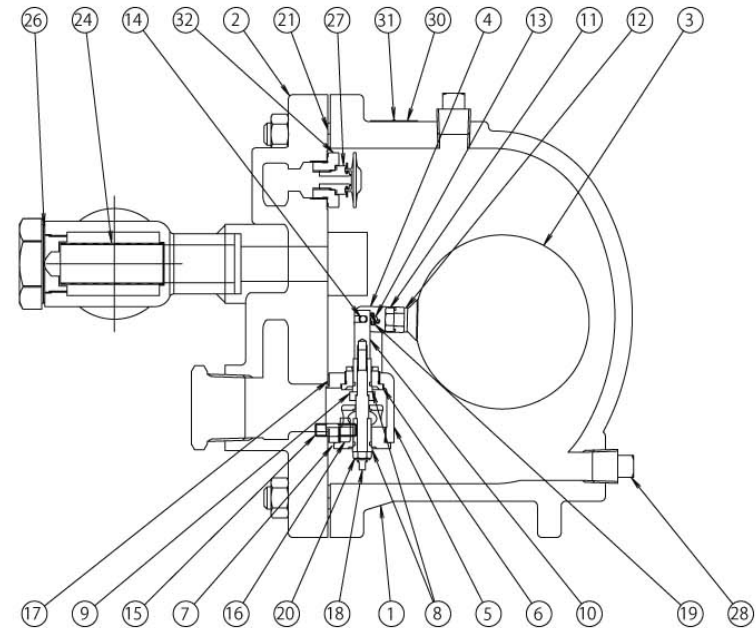
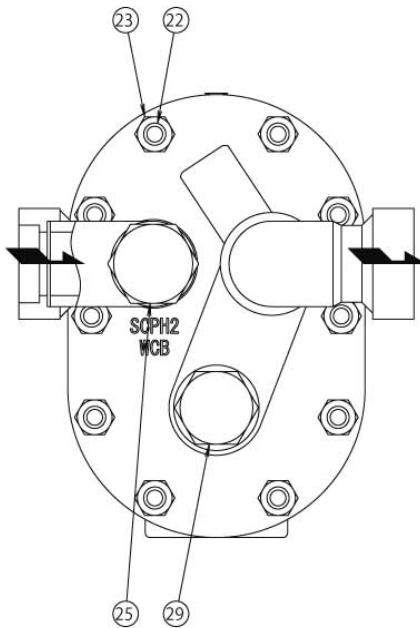


- | | | |
|---------------|-------------------|---------------------------------------|
| 1. Body | 12. Spring washer | 23. Cover nut |
| 2. Cover | 13. Pin | 24. Screen |
| 3. Float | 14. Pin | 25. Screen plug |
| 4. Lever | 15. Holder bolt | 26. Screen plug gasket |
| 5. Holder | 16. Holder nut | 27. Air vent |
| 6. Valve seat | 17. Holder gasket | 28. Body plug |
| 7. Valve seat | 18. Shaft | 29. Cover plug |
| 8. Valve | 19. Split pin | 30. Name plate |
| 9. Collar | 20. U-nut | 31. Rivet |
| 10. Lever nut | 21. Cover gasket | 32. Bush (only for the GH50-32 model) |
| 11. Bolt | 22. Cover bolt | |

GH50D model
GH50D-2/-6/-10/-21F models

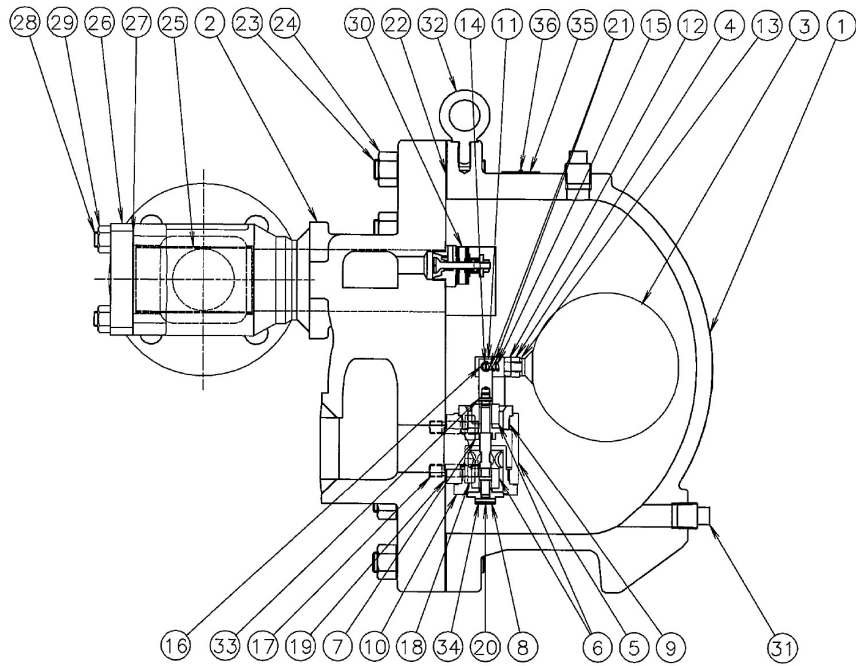


GH50D-2/-6/-10/-21W models

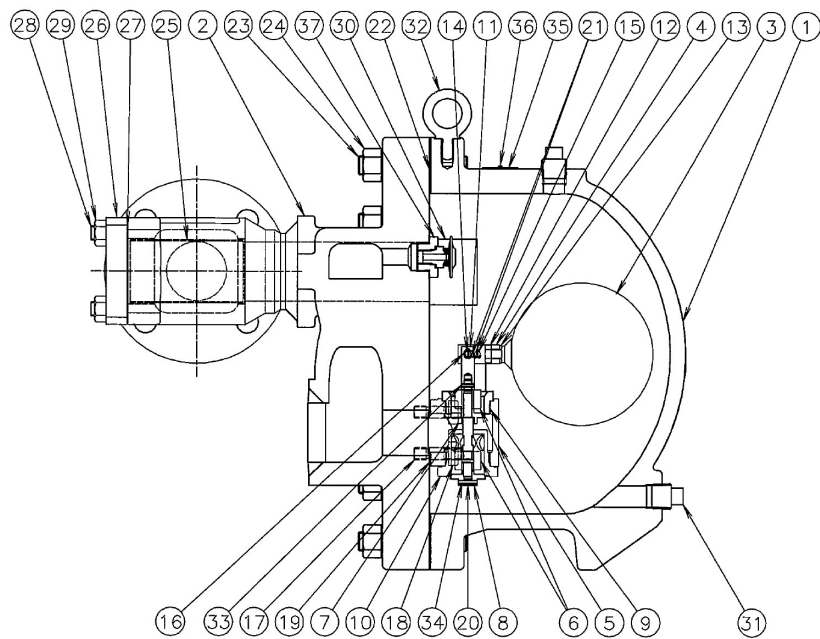


- | | | |
|---------------|-------------------|------------------------|
| 1. Body | 12. Spring washer | 23. Cover nut |
| 2. Cover | 13. Pin | 24. Screen |
| 3. Float | 14. Pin | 25. Screen plug |
| 4. Lever | 15. Holder bolt | 26. Screen plug gasket |
| 5. Holder | 16. Holder nut | 27. Air vent |
| 6. Valve seat | 17. Holder gasket | 28. Body plug |
| 7. Valve seat | 18. Shaft | 29. Cover plug |
| 8. Valve | 19. Split pin | 30. Name plate |
| 9. Collar | 20. U-nut | 31. Rivet |
| 10. Lever nut | 21. Cover gasket | 32. Bush |
| 11. Bolt | 22. Cover bolt | |

GH60-F model

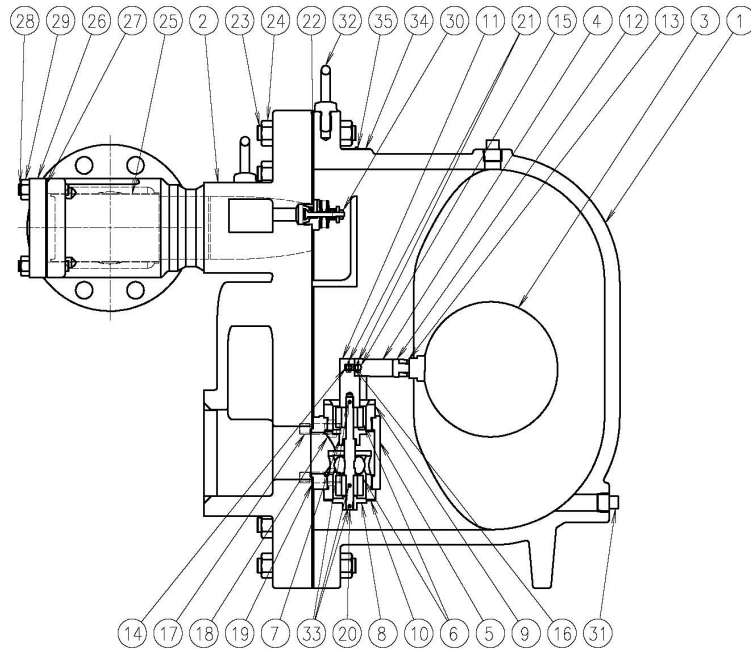


GH60D-F model

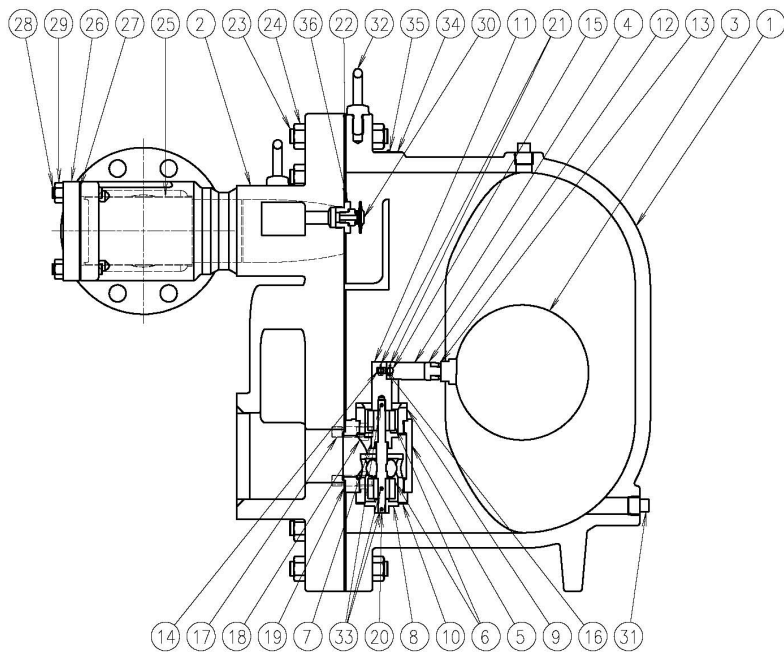


- | | | |
|-------------------|-------------------|--------------------------------|
| 1. Body | 14. Pin | 27. Screen cover gasket |
| 2. Cover | 15. Pin | 28. Screen cover bolt |
| 3. Float | 16. Spacer | 29. Screen cover nut |
| 4. Lever | 17. Holder bolt | 30. Air vent |
| 5. Holder | 18. Holder nut | 31. Plug |
| 6. Guide wing | 19. Holder gasket | 32. Eye bolt |
| 7. Valve A | 20. Shaft | 33. Spring pin |
| 8. Valve B | 21. Split pin | 34. Spring pin |
| 9. Valve seat A | 22. Cover gasket | 35. Name plate |
| 10. Valve seat B | 23. Cover bolt | 36. Rivet |
| 11. Lever nut | 24. Cover nut | 37. Bush(only for GH60D model) |
| 12. Bolt | 25. Screen | |
| 13. Spring washer | 26. Screen cover | |

GH70-F model



GH70D-F model



- | | | |
|-------------------|-------------------|--------------------------------|
| 1. Body | 14. Pin | 27. Screen cover gasket |
| 2. Cover | 15. Pin | 28. Screen cover bolt |
| 3. Float | 16. Washer | 29. Screen cover nut |
| 4. Lever | 17. Holder bolt | 30. Air vent |
| 5. Holder | 18. Holder nut | 31. Plug |
| 6. Guide wing | 19. Holder gasket | 32. Eye bolt |
| 7. Valve A | 20. Shaft | 33. Spring pin |
| 8. Valve B | 21. Split pin | 34. Name plate |
| 9. Valve seat A | 22. Cover gasket | 35. Rivet |
| 10. Valve seat B | 23. Cover bolt | 36. Bush(only for GH70D model) |
| 11. Lever nut | 24. Cover nut | |
| 12. Bolt | 25. Screen | |
| 13. Spring washer | 26. Screen cover | |

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

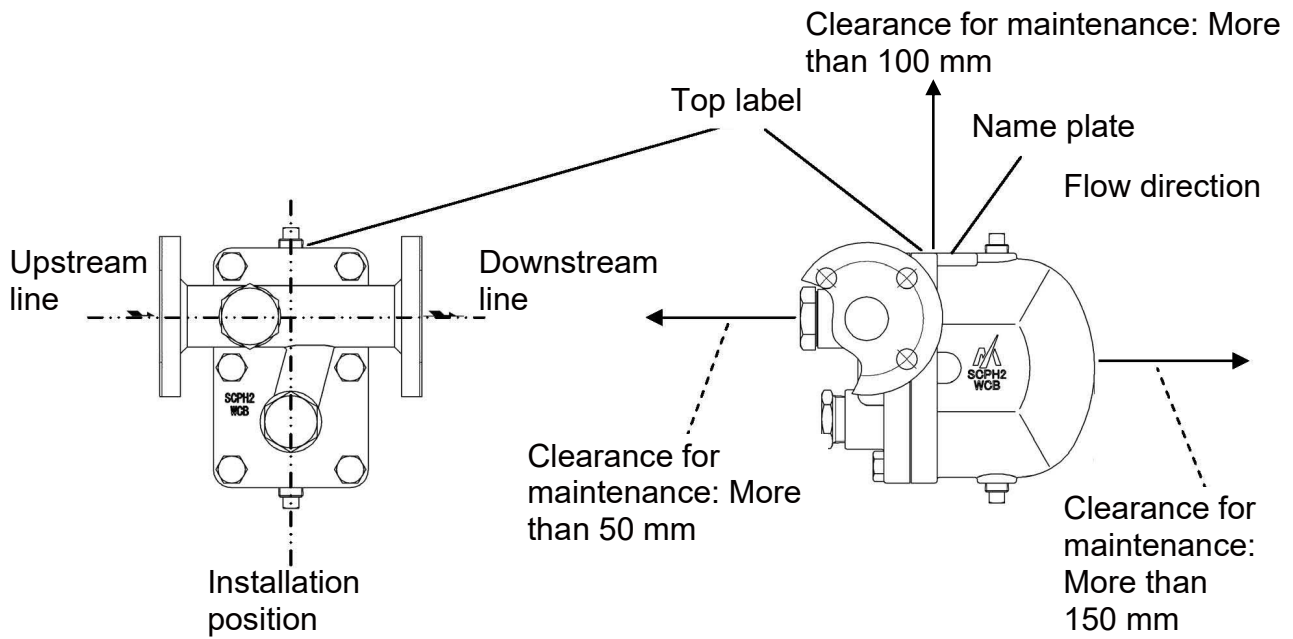
Before installing the product, open both isolation valves and the bypass valve, if one exists, to blow out any debris or dirt inside the pipeline. After blowing out the line, before starting to work, close the isolation valves and allow time for the temperature to drop to a safe working temperature.

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

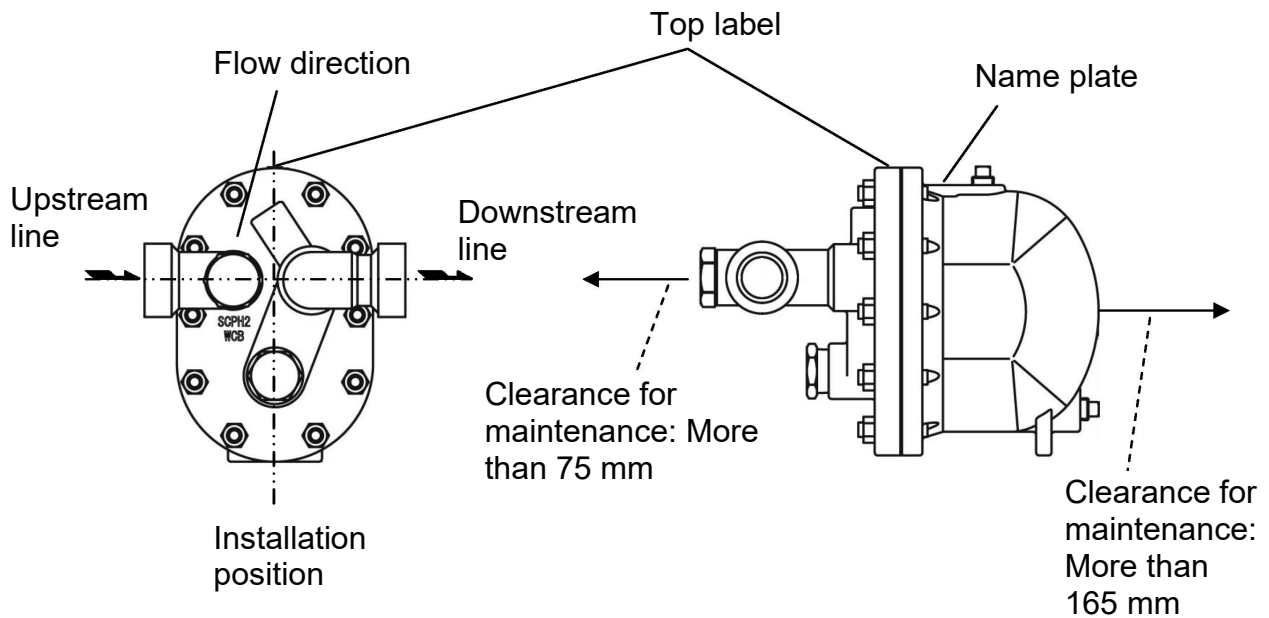
The GH60/GH60D/GH70/GH70D models are a heavy product. You are recommended to reinforce lines to support the product's weight.

- (1) Remove the dustproof seals covering both connections.
 - (2) Check the flow direction indicated on the side of the body.
 - (3) When installing the GH40/GH50/GH60/GH70, install it so that the flow from the upstream line to the downstream line is horizontal and the top label or the name plate is on the top side of the body. Install the GH40/GH50/GH60/GH70 at the end of a pipe that is angling down, so that condensate flows into the steam trap easily.
- Open the isolation valve on the upstream line slowly and make sure the product works normally.

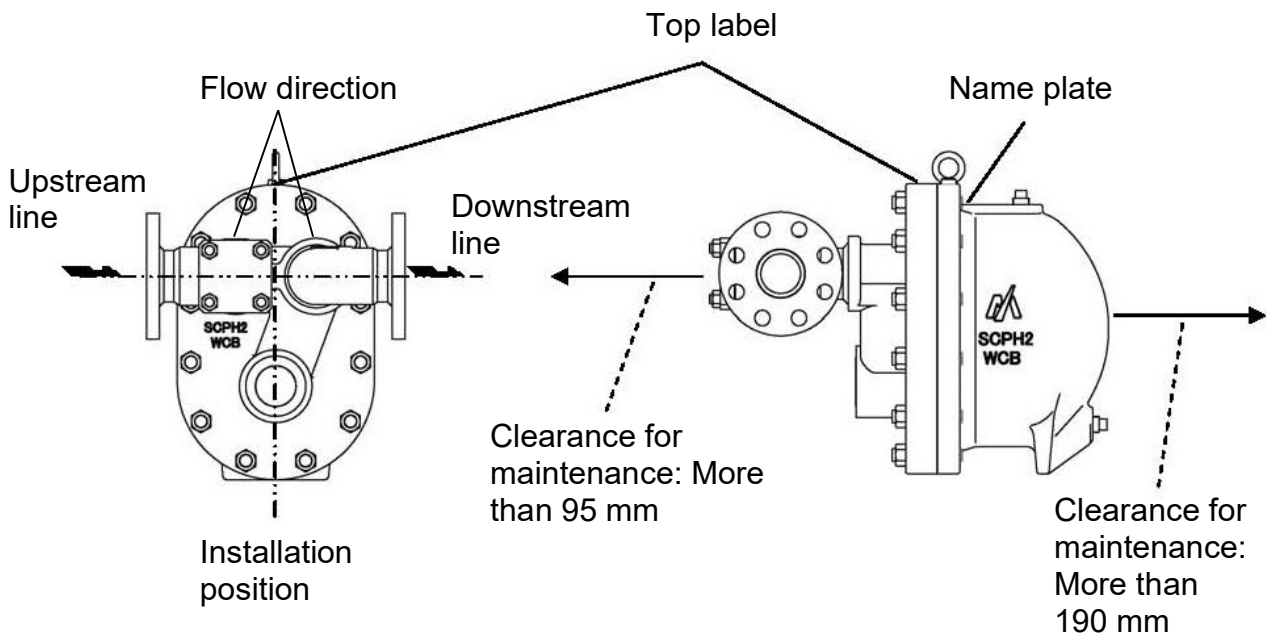
GH40 model



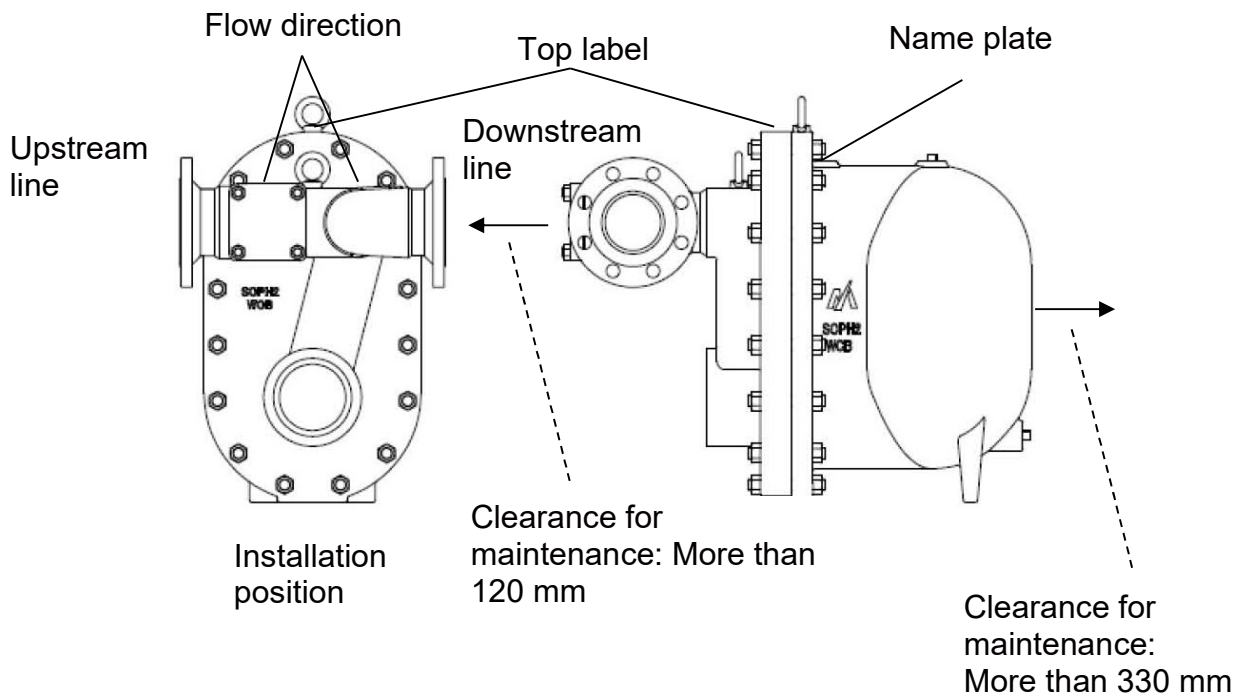
GH50 model



GH60 model



GH70 model



4 MAINTENANCE



CAUTION

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

The performance of steam traps deteriorates gradually over time due to wear, corrosion or dirt accumulating around the valve seat. To keep steam control systems and equipment working well, periodic maintenance of steam traps is essential.

4.1 Tools for Testing Steam Traps

In order to test steam traps, ultrasonic testers, sound detectors, and thermometers have been used for years. These tools are relatively easy to use and are useful for making rough estimates of the level of deterioration of a trap. However, to determine deterioration levels and steam losses quantitatively, special tools for testing steam traps are required. Dr. Trap and Dr. Trap Jr. are testing equipment that was developed specifically for diagnosing steam traps and analyzing survey results automatically. Use these tools to avoid tiresome jobs on site and save working time.

4.2 Working Conditions of a Steam Trap

Steam trap failures can be classified as either 'Leaking' or 'Plugged'. The level of a steam leak is generally determined by the intensity of the ultrasonic vibration generated in the valve seat inside of a steam trap. Plugging is diagnosed by measuring the surface temperature. As plugging progresses due to a buildup of dirt in the trap, it finally becomes completely plugged. Then the surface temperature will drop to around 40 degrees centigrade, or lower.

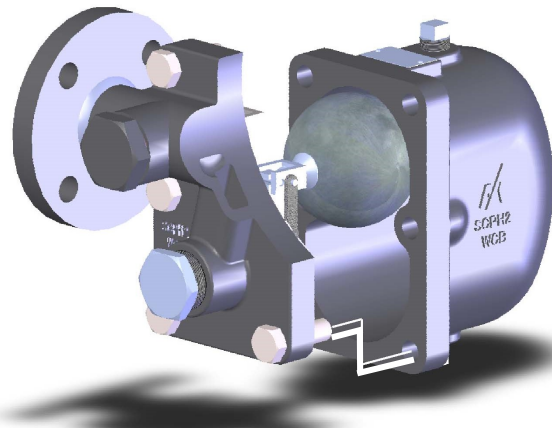
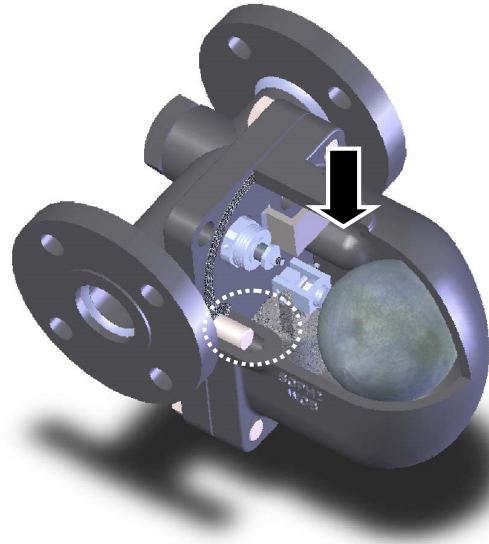
GH40 model

4.3 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.

4.3.1 Disassembling the trap

- 1) Loosen the four cover bolts (21) and 2 cover nuts (32), and remove the body (1).
- 2) The bolt hole makes a convex area (marked two positions: Arrow and dashed line) inside the body. Therefore, you must remove the body (1) carefully so that the internal unit is not damaged.
- 3) Lower or raise the body (1) a little, and then remove it so that the float (3) does not contact the convex area surrounding the bolt hole inside the body (1).
- 4) The internal unit is secured to the cover (2). Remove the four nuts (15), and then remove the valve unit connected to the float (3).
- 5) Secure the lever (4) with a wrench or similar device and rotate the float (3) by hand to remove it.



4.3.2 Disassembling the air vent

- 1) Remove the body (1), the same as described in the procedure for “Disassembling the trap” above.
- 2) Remove the air vent (25) from the cover (2).
(Only for the GH40-32/GH40D, remove the air vent (25) from the bush (30).)

4.3.3 Disassembling the screen

- 1) Remove the screen plug (23).
- 2) Remove the screen (22) from the cover (2).

Take the appropriate measures, as described in Section 6, “Troubleshooting”. Reassemble the parts as follows, reversing the procedure used to disassemble them. Refer to the torque table to learn the correct torque for each part.

GH50 model

4.3 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.

4.3.1 Disassembling the trap

- 1) Loosen the ten cover nuts (23) and remove the body (1).
- 2) The internal unit is secured to the cover (2). Remove the four holder nuts (16), and then remove the valve unit connected to the float (3).
- 3) Secure the lever (4) with a wrench or similar device and rotate the float (3) by hand to remove it.

4.3.2 Disassembling the air vent

- 1) Remove the body (1), the same as described in the procedure for “Disassembling the trap” above.
- 2) Remove the air vent (27) from the cover (2).
(Only for the GH50-32/GH50D, remove the air vent (27) from the bush (32).)

4.3.3 Disassembling the screen

- 1) Remove the screen plug (25).
- 2) Remove the screen (24) from the cover (2).

Take the appropriate measures, as described in Section 6, “Troubleshooting”.

Reassemble the parts as follows, reversing the procedure used to disassemble them.

Refer to the torque table to learn the correct torque for each part.

GH60 model

4.3 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.

4.3.1 Disassembling the trap

- 1) Loosen the twelve cover nuts (24) and remove the body (1).
- 2) The internal unit is secured to the cover (2). Remove the holder nuts (18), and then remove the valve unit connected to the float (3).

- 3) Secure the lever (4) with a wrench or similar device and rotate the float (3) by hand to remove it.

4.3.2 Disassembling the air vent

- 1) Remove the body (1), as described in the procedure for “Disassembling the trap” above.
- 2) Remove the air vent (30) from the cover (2).
(Only for the GH60D, remove the air vent (30) from the bush (37).)

4.3.3 Disassembling the screen

- 1) Remove the screen cover nuts (29), and then remove the screen cover (26).
- 2) Remove the screen (25) from the cover (2).

Take the appropriate measures, as described in Section 6, “Troubleshooting”.

Reassemble the parts as follows, reversing the procedure used to disassemble them.

Refer to the torque table to use the correct torque for each part.

GH70 model

4.3 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.

4.3.1 Disassembling the trap

- 1) Loosen the thirty-two cover nuts (24) and remove the body (1).
- 2) The internal unit is secured to the cover (2). Remove the four holder nuts (18), and then remove the valve unit connected to the float (3).
- 3) Secure the lever (4) with a wrench or similar device and rotate the float (3) by hand to remove it.

4.3.2 Disassembling the air vent

- 1) Remove the body (1), as described in the procedure for “Disassembling the trap” above.
- 2) Remove the air vent (30) from the cover (2).
(Only for the GH70D, remove the air vent (30) from the bush (36).)

4.3.3 Disassembling the screen

- 1) Remove the four screen cover nuts (29), and then remove the screen cover (26).
- 2) Remove the screen (25) from the cover (2).

Take the appropriate measures, as described in Section 6, "Troubleshooting".

Reassemble the parts as follows, reversing the procedure used to disassemble them.

Refer to the torque table to use the correct torque for each part.

GH40 (D) model

4.3.4 Reassembling the screen

- 1) Attach the screen (22) to the screen plug (23).
- 2) Attach the screen plug gasket (24), and fit the screen plug (23) into the cover (2) and tighten it.

Now, be careful to store the tip of the screen pointing into the place where it fits into the cover.

4.3.5 Reassembling the air vent

- 1) Secure the air vent (25) on the cover (2).
(Only for the GH40-32/GH40D, tighten the air vent (25) on the bush (30) attached to the cover (2).)

4.3.6 Reassembling the trap

- 1) Connect the float (3) to the valve unit.
- 2) Attach the holder gasket (16) to the valve unit holder (5).
- 3) Secure the valve unit to the cover (2). In this case, make sure that the holder gasket is fitted in the right place. Tighten it with the four holder nuts (15).

- Make sure to tighten the nuts in a crosswise pattern, to avoid uneven tightening.

- 4) Attach the cover gasket (20) to the cover (2) and attach them to the body (1).

When reassembling the trap, attach the body carefully so that the internal unit is not damaged, noting the convex area created by the bolt hole inside the body.

Make sure that the gasket is installed in the right place.

Tighten the body (1) with the 4 cover bolts (21) and cover nuts (32).

- Finally, tighten the bolts in a crosswise pattern to avoid uneven tightening.

The torque for each part is shown in the following table.

Parts	Models	Tools	Across the flats	Torque
Cover bolt (21)	GH40/GH40D	Torque wrench	24 mm (0.94 in.)	150N-m (1500kgf-cm)
Holder nut (15)	GH40/GH40D	Torque wrench	13 mm (0.51 in.)	20N-m (200kgf-cm)
Air vent (25)	GH40-2/-6/-10/-21	Spanner (Wrench)	32 mm (1.26 in.)	130N-m (1300kgf-cm)
	GH40-32		17 mm (0.67 in.)	30N-m (300kgf-cm)
	GH40D		17 mm (0.67 in.)	25N-m (250kgf-cm)
Screen plug (23)	GH40/GH40D	Torque wrench	50 mm (1.97 in.)	300N-m (3000kgf-cm)
Cover nut (32)	GH40/GH40D	Torque wrench	24mm (0.94 in.)	150N-m (1500kgf-cm)

GH50 (D) model

4.3.4 Reassembling the screen

- 1) Attach the screen (24) to the screen plug (25).
- 2) Attach the screen plug gasket (26), and fit the screen plug (25) into the cover (2) and tighten it.

Now, be careful to store the tip of the screen pointing into the place where it fits into the cover.

4.3.5 Reassembling the air vent

- 1) Secure the air vent (27) on the cover (2).
(Only for the GH50-32/GH50D, tighten the air vent (27) on the bush (32) attached to the cover (2).)

4.3.6 Reassembling the trap

- 1) Connect the float (3) to the valve unit.
- 2) Attach the holder gasket (17) to the valve unit holder (5).
- 3) Secure the valve unit to the cover (2). In this case, make sure that the holder gasket (17) is fitted in the right place. Tighten it with the four holder bolts (15) and holder nuts (16).
 - Make sure to tighten the nuts in a crosswise pattern, to avoid uneven tightening.
- 4) Attach the cover gasket (21) to the cover (2) and attach them to the body (1).
Make sure that the cover gasket is installed in the right place.
Tighten the body (1) with the 10 cover bolts (22) and cover nuts (23).
 - Finally, tighten the bolts in a crosswise pattern to avoid uneven tightening.

The torque for each part is shown in the following table.

Parts	Models	Tools	Across the flats	Torque
Cover nut (23)	GH50/GH50D	Torque wrench	22mm (0.87 in.)	120N-m (1200kgf-cm)
Holder nut (16)	GH50/GH50D	Torque wrench	13 mm (0.51 in.)	20N-m (200kgf-cm)
Air vent (27)	GH50-2/-6/-10/-21	Spanner (Wrench)	32 mm (1.26 in.)	130N-m (1300kgf-cm)
	GH50-32		17 mm (0.67 in.)	30N-m (300kgf-cm)
	GH50D		17 mm (0.67 in.)	25N-m (250kgf-cm)
Screen plug (25)	GH50/GH50D	Torque wrench	50 mm (1.97 in.)	300N-m (3000kgf-cm)

GH60 (D) model

4.3.4 Reassembling the screen

- 1) Attach the screen (25) to the cover (2).
- 2) Attach the screen cover bolts (28) and the screen cover gasket (27), and fit the screen cover (26) to the cover (2). Tighten the screen cover nuts (29).
 - Be careful to store the tip of the screen pointing into the place where it fits into the cover. When tightening the screen cover nuts (29), tighten them evenly crosswise.

4.3.5 Reassembling the air vent

- 1) Secure the air vent (30) on the cover (2).
(Only for the GH60D, tighten the air vent (30) on the bush (37) attached to the cover (2).)

4.3.6 Reassembling the trap

- 1) First install the bolt and spring washer into the lever (4), and secure it with a wrench or similar device and rotate the float (3) by hand to connect the float (3) to the valve unit.
- 2) Attach the holder gasket (19) to the valve unit holder (5).
- 3) Secure the valve unit to the cover (2). Make sure that the holder gasket (19) is fitted in the right place. Tighten it with the four holder bolts (17) and holder nuts (18).
 - Make sure to tighten the nuts in a crosswise pattern, to avoid uneven tightening.
- 4) Attach the cover gasket (22) to the cover (2) and attach the cover to the body (1).
Make sure that the gasket is installed in the right place.
Tighten the cover bolts (23) and cover nuts (24).
 - Tighten the nuts in a crosswise pattern to avoid uneven tightening.

The torque for each part is shown in the following table.

Parts	Models	Tools	Across the flats	Torque
Cover Nut(24)	GH60/GH60D	Torque wrench	24mm (0.94")	160N-m (1600kgf-cm)
Holder nut (18)	GH60/GH60D	Torque wrench	17mm (0.67")	30N-m (300kgf-cm)
Air vent (30)	GH60	Spanner (Wrench)	32mm (1.26")	130N-m (1300kgf-cm)
	GH60D		17mm (0.67")	25N-m (250kgf-cm)
Screen cover nut (29)	GH60/GH60D	Torque wrench	19mm (0.75")	30N-m (300kgf-cm)
Bush (37)	GH60D	Spanner (Wrench)	32mm (1.26")	130N-m (1300kgf-cm)
Bolt (13)	GH60/GH60D	Spanner (Wrench)	13mm (0.51")	20N-m (200kgf-cm)

GH70 (D) model

4.3.4 Reassembling the screen

- 1) Attach the screen (25) to the cover (2).
- 2) Attach the screen cover bolts (28) and the screen cover gasket (27), and fit the screen cover (26) to the cover (2). Tighten the screen cover nuts (29).
 - Be careful to store the tip of the screen pointing into the place where it fits into the cover. When tightening the screen cover nuts (29), tighten them evenly crosswise.

4.3.5 Reassembling the air vent

- 1) Secure the air vent (30) on the cover (2).
(Only for the GH70D, tighten the air vent (30) on the bush (36) attached to the cover (2).)

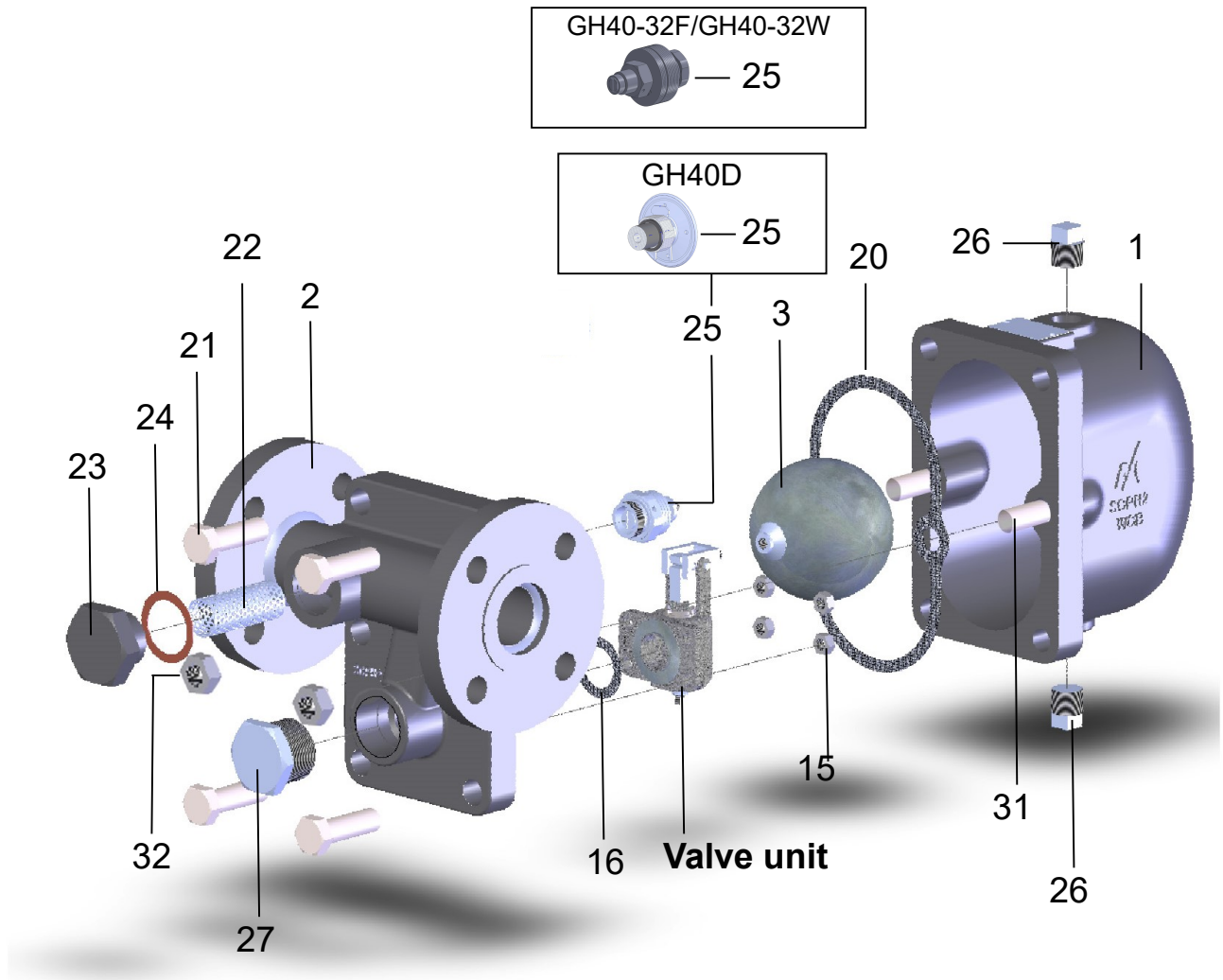
4.3.6 Reassembling the trap

- 1) First install the bolt and spring washer into the lever (4), and secure it with a wrench or similar device and rotate the float (3) by hand to connect the float (3) to the valve unit.
- 2) Attach the holder gasket (19) to the valve unit holder (5).
- 3) Secure the valve unit to the cover (2). Make sure that the holder gasket (19) is fitted in the right place. Tighten it with the four holder bolts (17) and holder nuts (18).
 - Make sure to tighten the nuts in a crosswise pattern, to avoid uneven tightening.
- 4) Attach the cover gasket (22) to the cover (2) and attach the cover to the body (1). Make sure that the gasket is installed in the right place. Tighten the cover bolts (23) and cover nuts (24).
 - Tighten the nuts in a crosswise pattern to avoid uneven tightening.

The torque for each part is shown in the following table.

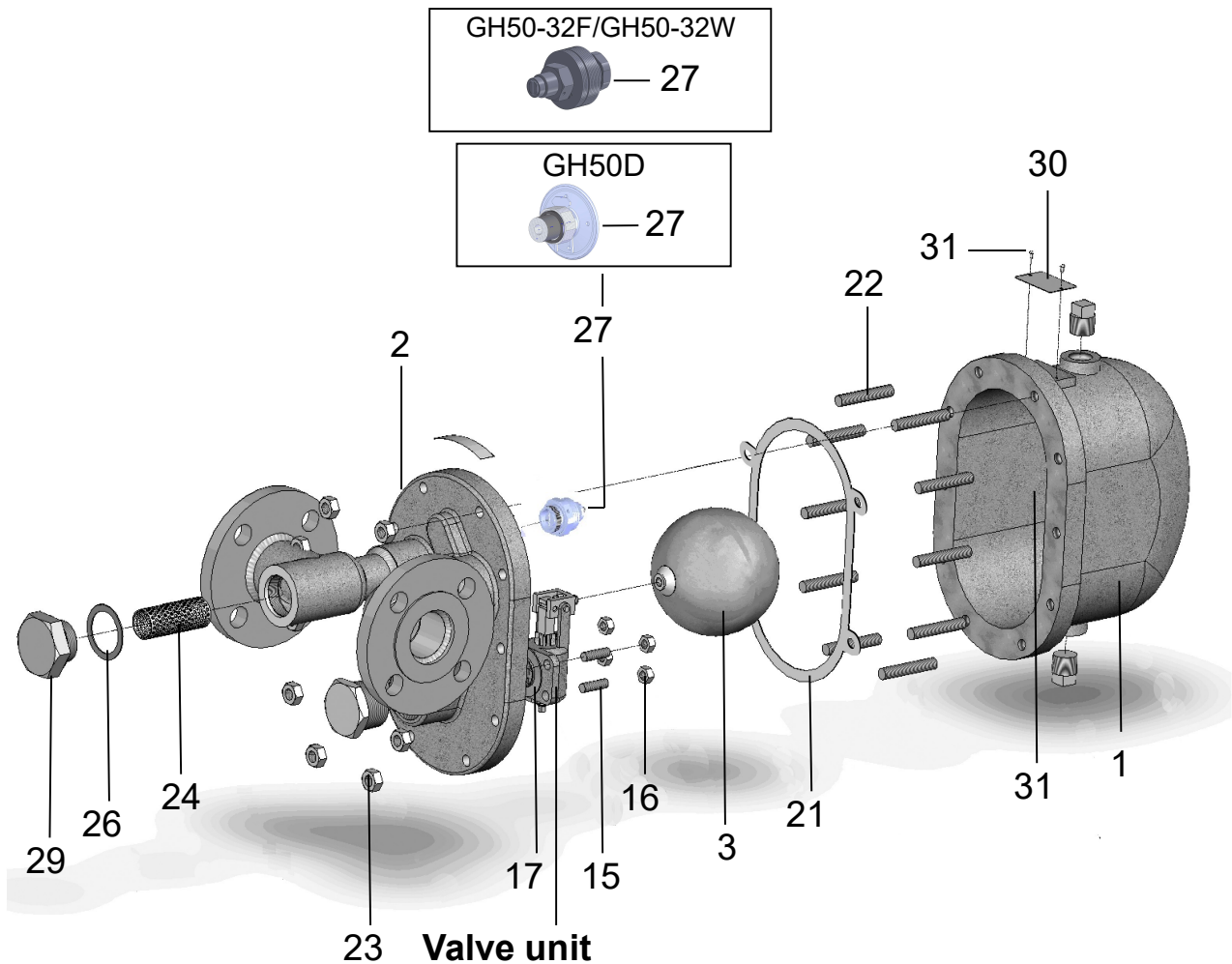
Parts	Models	Tools	Across the flats	Torque
Cover Nut(24)	GH70/GH70D	Torque wrench	24mm (0.94")	220N-m (2200kgf-cm)
Holder nut (18)	GH70/GH70D	Torque wrench	19mm (0.75")	60N-m (600kgf-cm)
Air vent (30)	GH70	Spanner (Wrench)	32mm (1.26")	130N-m (1300kgf-cm)
	GH70D		17mm (0.67")	25N-m (250kgf-cm)
Screen cover nut (29)	GH70/GH70D	Torque wrench	19mm (0.75")	60N-m (600kgf-cm)
Bolt (12)	GH70/GH70D	Spanner (Wrench)	13mm (0.51")	20N-m (200kgf-cm)

GH40 model



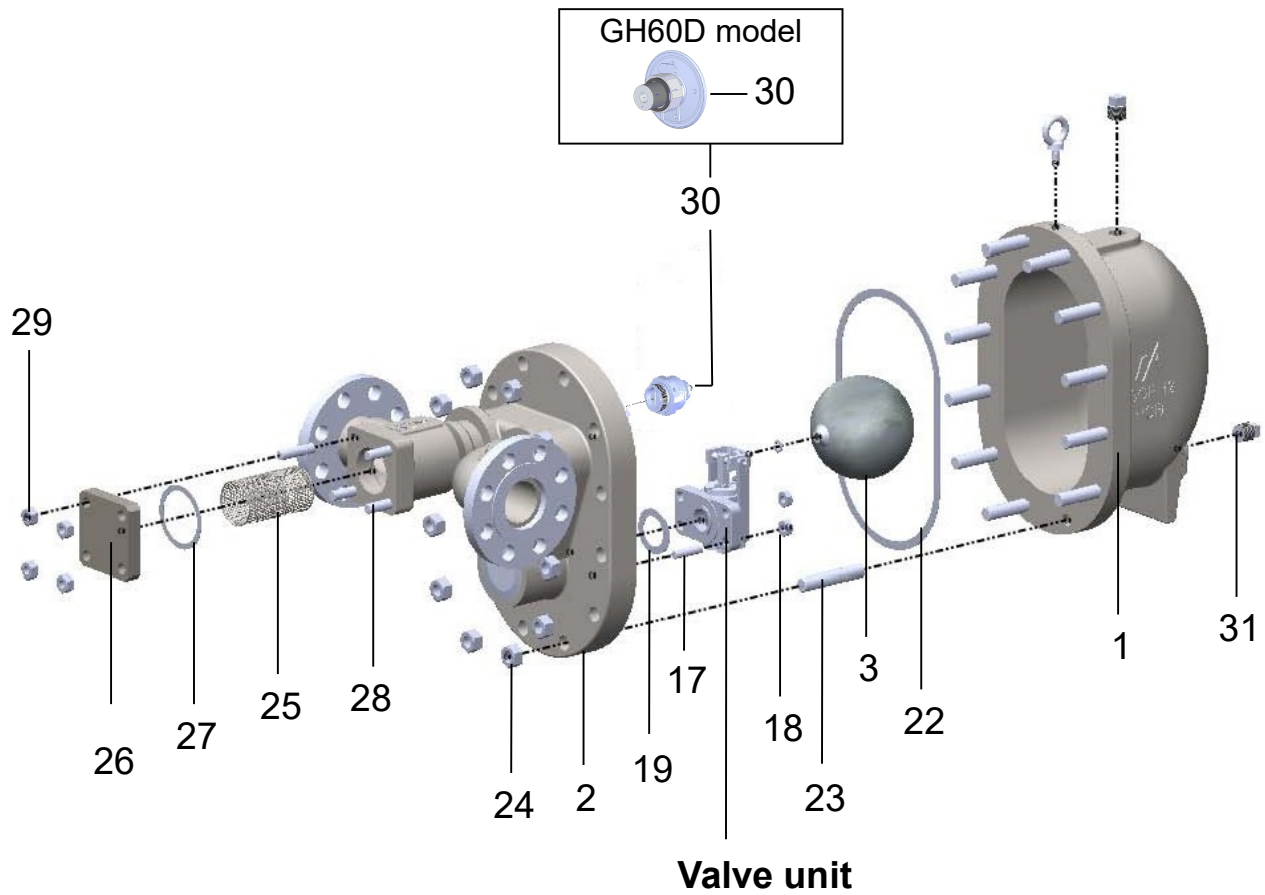
- | | | | |
|-----|---------------|-----|------------------------------------|
| 1. | Body | 23. | Screen plug |
| 2. | Cover | 24. | Screen plug gasket |
| 3. | Float | 25. | Air vent |
| 15. | Holder nut | 26. | Plug |
| 16. | Holder gasket | 27. | Plug |
| 20. | Cover gasket | 30. | Bush (Only for the GH40-32 /GH40D) |
| 21. | Cover bolt | 31. | Bolt |
| 22. | Screen | 32. | Cover nut |

GH50 model



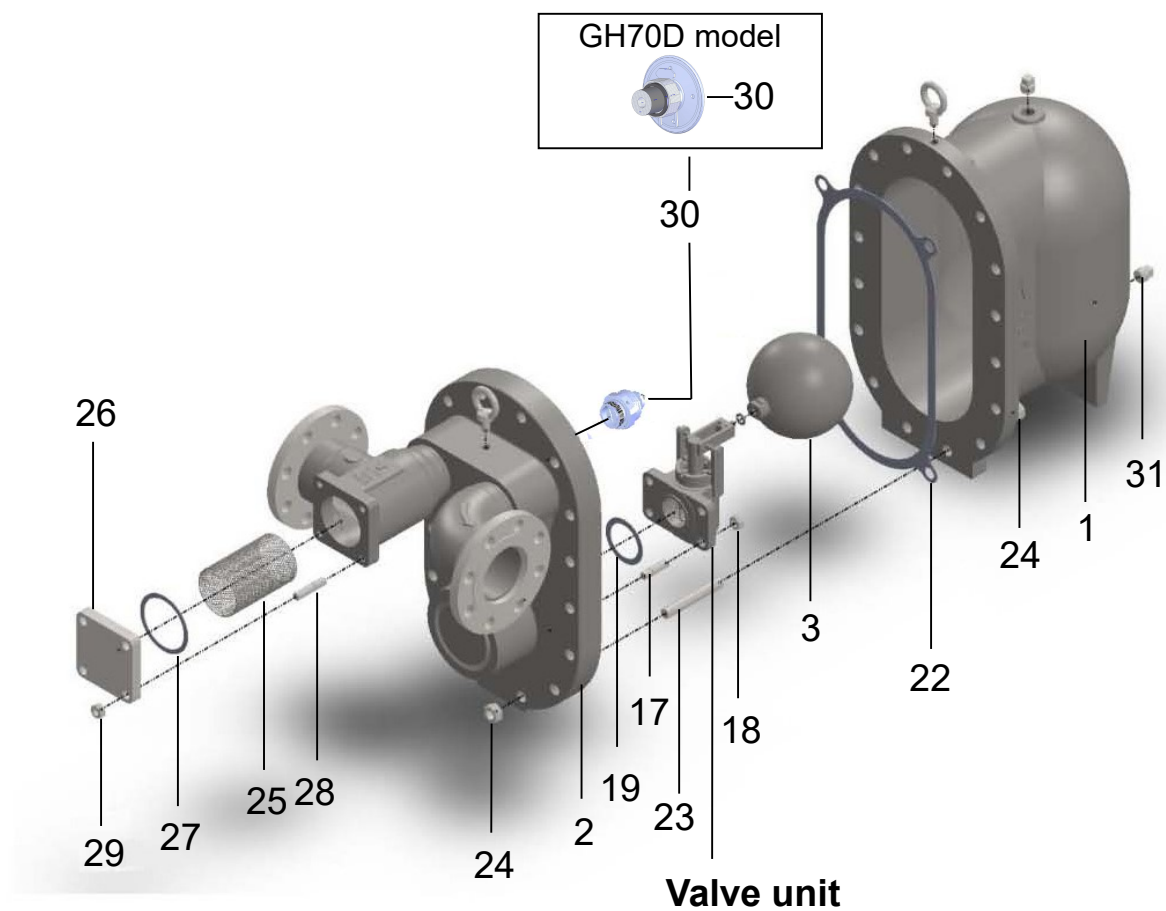
- | | | | |
|-----|---------------|-----|------------------------------------|
| 1. | Body | 24. | Screen |
| 2. | Cover | 25. | Screen plug |
| 3. | Float | 26. | Screen plug gasket |
| 15. | Holder bolt | 27. | Air vent |
| 16. | Holder nut | 30. | Name plate |
| 17. | Holder gasket | 31. | Rivet |
| 21. | Cover gasket | 33. | Bush (Only for the GH40-32 /GH40D) |
| 22. | Cover bolt | | |
| 23. | Cover nut | | |

GH60 model



-
- | | | | |
|-----|---------------|-----|---------------------------------|
| 1. | Body | 25. | Screen |
| 2. | Cover | 26. | Screen cover |
| 3. | Float | 27. | Screen cover gasket |
| 17. | Holder bolt | 28. | Screen cover bolt |
| 18. | Holder nut | 29. | Screen cover nut |
| 19. | Holder gasket | 30. | Air vent |
| 22. | Cover gasket | 31. | Plug |
| 23. | Cover bolt | 37. | Bush (only for the GH60D model) |
| 24. | Cover nut | | |

GH70 model



-
- | | | | |
|-----|---------------|-----|---------------------------------|
| 1. | Body | 25. | Screen |
| 2. | Cover | 26. | Screen cover |
| 3. | Float | 27. | Screen cover gasket |
| 17. | Holder bolt | 28. | Screen cover bolt |
| 18. | Holder nut | 29. | Screen cover nut |
| 19. | Holder gasket | 30. | Air vent |
| 22. | Cover gasket | 31. | Plug |
| 23. | Cover bolt | 36. | Bush (only for the GH70D model) |
| 24. | Cover nut | | |

5 TROUBLESHOOTING

Problem		Possible cause	Solution
Steam leaks or blows through.		Foreign material such as scale or dirt is stuck between the valve, the valve seat, and the holder of the valve unit.	Disassemble the valve unit and remove the material.
		The valve, the valve seat and/or the holder are damaged, worn or corroded.	Replace the valve unit.
		The threads on the valve seat or holder in the valve unit are loose.	Retighten the threads on the valve seat or holder in the valve unit.
		The holder nut is loose.	Retighten the nut.*1
		The holder gasket is damaged.	Replace the holder gasket.
		Foreign material such as scale or dirt stuck on the air vent.	Disassemble the air vent unit and remove the material.
		The air vent is loose.	Retighten the air vent or the bush.*2
		The seating surfaces on the valve or the valve seat in the air vent is damaged, worn or corroded	Replace the air vent.
		Wrong installation position	Change the installation so that the top label or the name plate is on the top side of the body.
Steam leaks from the body.		From between the body and body cover	
		The cover bolts or cover nuts are loose.	Retighten them.*3
		Damage, erosion or deterioration of the cover gasket	Replace the cover gasket.
		The gasket sealing surface on the body or bottom cover is damaged.	Replace the body with a new one, or replace the bottom cover.
		From between the body and plug	
		The plug is loose.	Retighten the plug.*4
		The gasket is damaged.	Replace the gasket.
		The gasket sealing surface on the body or plug is damaged.	Replace the body with a new one, or replace the plug.
		Insufficient condensate discharged, or no condensate discharged.	
Foreign material such as a scale or dirt is stuck in the valve seat.	Clean the valve seat.		
The float is damaged.	Replace the float.		
The air vent is damaged.	Replace the air vent.		
Wrong installation position	Correct the installation position.		
The steam pressure was over the specified maximum operating pressure.	Lower the pressure or replace the trap with one that has a higher maximum operating pressure.		
Insufficient condensate capacity.	Replace the trap with a larger capacity trap.		

*1, *2, *3 and *4: Refer to the torque table in Section 4, "Maintenance" to retighten the parts to the correct torque.

6 WARRANTY

6.1 Warranty period

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

6.2 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 ours, or a disallowed use environment
- 4) When a repair or modification has been performed by anyone other than us 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 our responsibility

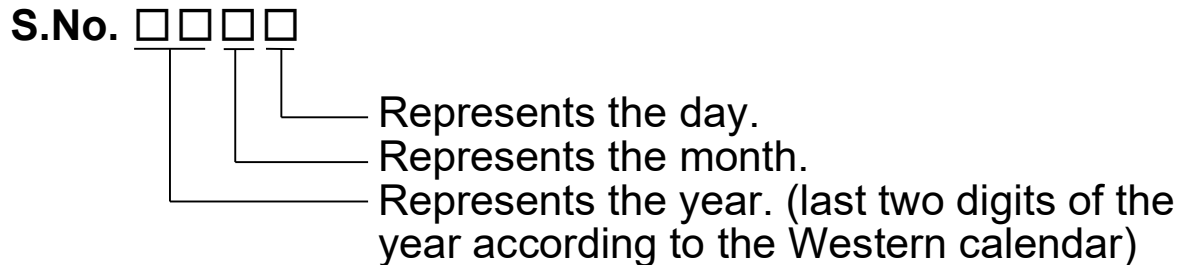
6.3 Warranty limitation

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

7 SERIAL NUMBER (S. No.) DESIGNATION

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

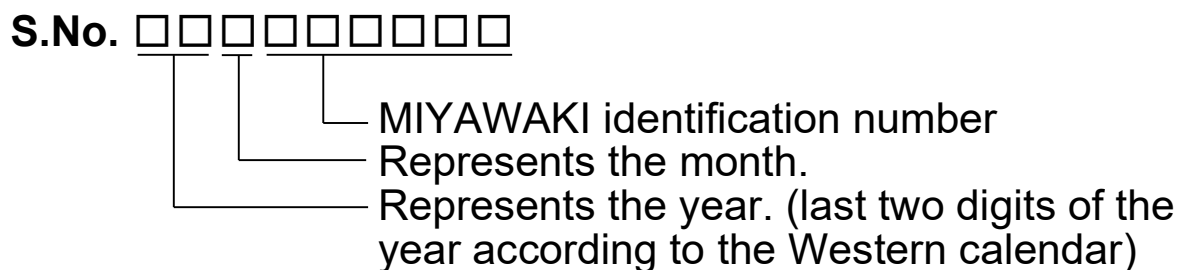
- For 4-digit display



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

8 GUIDANCE FOR READING SPECIAL PRODUCT NAME

○○○-○○-□

Special symbol:
Symbol apply only to special product
(Please refer to table 1 for details)
 English letter after “-“

Model symbol:
Product model number

Table 1 Symbol description

Suffix	Special contents
A	Trap for high-pressure gas installed property
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

For any questions about the product that you purchased or about the details in this user's manual, please contact the following.

- © 2023 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 you have, 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.
-



If you need any assistance regarding this manual, please contact MIYAWAKI INC.'s International Sales Dept. or its local representative. By scanning QR Code, you can access inquiry form.



INTERNATIONAL SALES DEPT.
2-1-30, Tagawakita, Yodogawa-ku, Osaka, 532-0021, Japan
Tel: +81-6-6302-5549
www.miyawaki-inc.com/en 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:



Room902 ,Building 8, Huaqing Chuangzhi Park, No.3 Qingyan Road, Huishan District,
Wuxi City Jiangsu Province China
Tel: +86-510-8359-5125
www.miyawaki-inc.com.cn e-mail: mywkwest@miyawaki-inc.com.cn

808015-05 2309

GH40/50/60/70