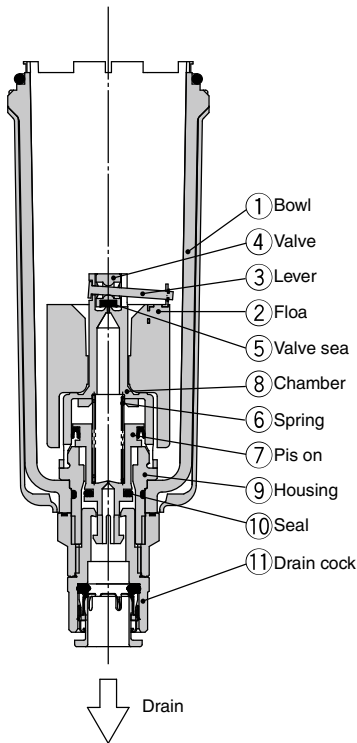
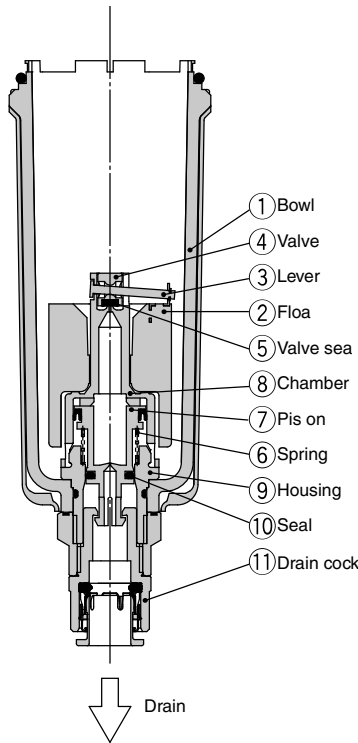


Working Principle: Float Type Auto Drain

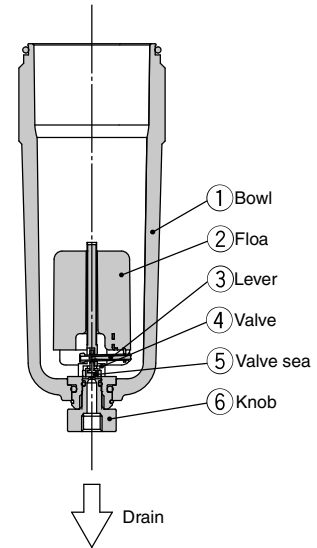
N.O. type: AD38-A, AD48-A



N.C. type: AD37-A, AD47-A



Compact auto drain N.C. type: AD17-A, AD27-A



- **When pressure inside the bowl is released:**

When pressure is released from the bowl ① the piston ⑦ is lowered by the spring ⑥. The sealing action of the seal ⑩ is interrupted and the outside air flows inside the bowl ① through the housing hole ⑨ and the drain cock ⑪.

Therefore if there is an accumulation of condensate in the bowl ① it will drain out through the drain cock.

- **When pressure is applied inside the bowl:**

When pressure is 0.1 MPa or more the force of the piston ⑦ surpasses the force of the spring ⑥ and the piston goes up. This pushes seal ⑩ up so that it creates a seal and the inside of the bowl ① is shut off from the outside air.

If there is no accumulation of condensate in the bowl ① at this time, the float ② will be pulled down by its own weight causing the valve ④ which is connected to the lever ③ to seal the valve seat ⑤.

- **When there is an accumulation of condensate in the bowl:**

The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted. This allows the pressure inside the bowl ① to enter the chamber ⑧. The result is that the combined pressure inside the chamber ⑧ and the force of the spring ⑥ lowers the piston ⑦. This causes the sealing action of the seal ⑩ to be interrupted and the accumulated condensate in the bowl ① drains out through the drain cock ⑪.

Turning the drain cock ⑪ manually counterclockwise lowers the piston ⑦ and causes the seal created by the seal ⑩ to be interrupted thus allowing the condensate to drain out.

- **When pressure inside the bowl is released:**

Even when pressure inside the bowl ① is released spring ⑥ keeps the piston ⑦ in its upward position.

This keeps the seal created by the seal ⑩ in place thus the inside of the bowl ① is shut off from the outside air.

Therefore even if there is an accumulation of condensate in the bowl ① it will not drain out.

- **When pressure is applied inside the bowl:**

Even when pressure is applied inside the bowl ① the combined force of the spring ⑥ and the pressure inside the bowl ① keeps the piston ⑦ in its upward position.

This maintains the seal created by the seal ⑩ in place thus the inside of the bowl ① is shut off from the outside air.

If there is no accumulation of condensate in the bowl ① at this time, the float ② will be pulled down by its own weight causing the valve ④ which is connected to the lever ③ to seal the valve seat ⑤.

- **When there is an accumulation of condensate in the bowl:**

The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted. This allows the pressure inside the bowl ① to enter the chamber ⑧.

The result is that the pressure inside the chamber ⑧ surpasses the force of the spring ⑥ and pushes the piston ⑦ downward.

This causes the sealing action of the seal ⑩ to be interrupted and the accumulated condensate in the bowl ① drains out through the drain cock ⑪.

Turning the drain cock ⑪ manually counterclockwise lowers the piston ⑦ and causes the seal created by the seal ⑩ to be interrupted thus allowing the condensate to drain out.

- **When pressure inside the bowl is released:**

Even when pressure inside the bowl ① is released the weight of the float ② causes the valve ④ which is connected to the lever ③ to seal the valve seat ⑤. As a result the inside of the bowl ① is shut off from the outside air. Therefore even if there is an accumulation of condensate in the bowl ① it will not drain out.

- **When pressure is applied inside the bowl:**

Even when pressure is applied inside the bowl ①, the weight of the float ② and the differential pressure that is applied to the valve ④ cause the valve ④ to seal the valve seat ⑤ and the outside air is shut off from the inside of the bowl ①.

- **When there is an accumulation of condensate in the bowl:**

The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted.

The condensate inside the bowl ① drains out through the knob ⑥.

Turning the knob ⑥ manually counterclockwise lowers it and causes the sealing action of the valve seat ⑤ to be interrupted which allows the condensate to drain out.