

The following is the relevant content of the 300X slow-closing and noise-eliminating check valve:

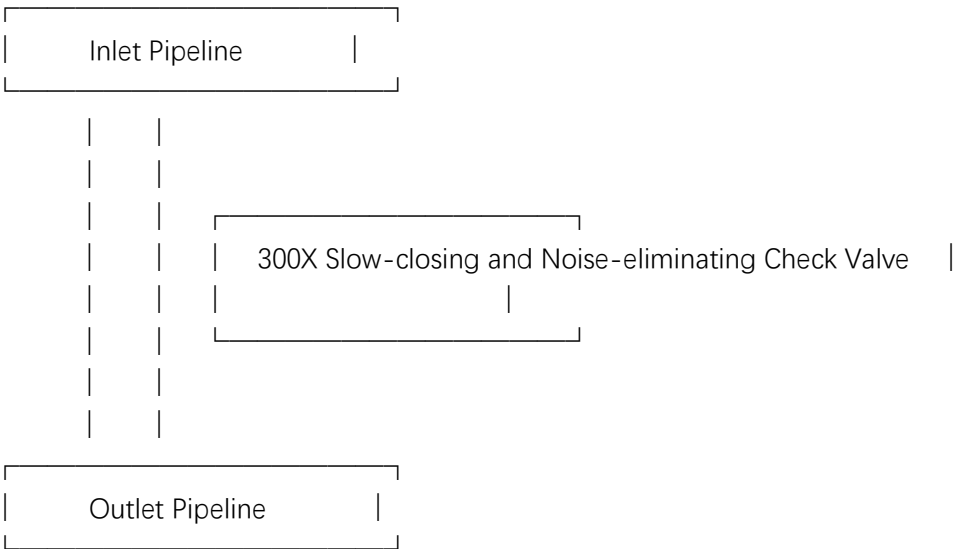
**Product Introduction**

The 300X slow-closing and noise-eliminating check valve is a kind of valve used to prevent the backflow of the medium in the pipeline, and it can effectively eliminate the water hammer phenomenon and reduce noise. It is mainly composed of components such as the valve body, valve disc, diaphragm, spring, and adjustment device.

- **Working Principle:** When the medium flows forward, the pressure pushes the valve disc to open, and the medium passes through the valve smoothly. When the medium stops flowing or shows a tendency of backflow, under the combined action of its own gravity, the spring force, and the reverse pressure of the medium, the valve disc first closes quickly to a certain angle, and then closes slowly until it is completely closed. This slow-closing process can effectively weaken the impact force generated by the backflow of the medium and prevent the water hammer from causing damage to the pipeline and equipment. At the same time, the special structure and sealing design of the valve can reduce the noise generated when the water flows through.
- **Structural Features:** The valve body is usually made of high-quality ductile iron or cast steel, which has high strength and corrosion resistance. The valve disc is reasonably designed and can open and close flexibly. As a key component for controlling the slow-closing action, the diaphragm can accurately adjust the closing speed of the valve disc according to the change of the medium pressure. The spring provides an auxiliary force for the closing of the valve disc to ensure that the valve disc can be reliably closed. The adjustment device can adjust the slow-closing time and closing speed of the valve disc according to the actual working conditions.

**Typical Installation Schematic Diagram**

plaintext



<-- Pay attention to the arrow direction of the valve body and install it according to the

water flow direction -->

(A strainer can be installed near the check valve on the inlet pipeline, and gate valves can be installed on the inlet and outlet pipelines as needed)

### **Maintenance and Troubleshooting**

- **Maintenance**
  - **Regular Inspection:** Check the sealing performance of the valve to see if there is any leakage. Check the movement of the valve disc to ensure that the valve disc can open and close flexibly. Check whether the settings of the adjustment device are correct and adjust them if necessary.
  - **Clean the Valve:** Regularly clean the impurities and dirt inside the valve to prevent the impurities from affecting the normal movement of the valve disc. Cleaning tools or cleaning agents can be used for cleaning, but be careful not to damage the components of the valve.
  - **Lubricate Components:** Lubricate the moving components such as the valve stem and spring. Use appropriate lubricants to reduce the friction between the components and extend the service life of the valve.
  - **Check the Diaphragm:** The diaphragm is a vulnerable component. Regularly check whether the diaphragm is damaged, aged, etc., and replace it in time if there are any problems.
- **Troubleshooting**
  - **Valve Leakage:** It may be caused by damage to the sealing surface, poor fit between the valve disc and the valve seat, or damage to the diaphragm. Check whether there are scratches, wear, etc. on the sealing surface, and repair or replace the sealing parts if there are any problems. Check the fit between the valve disc and the valve seat, adjust the position of the valve disc or replace the valve disc. If the diaphragm is damaged, replace the diaphragm in time.
  - **The Valve Disc Cannot Close Normally:** It may be that the valve disc is stuck by impurities, the spring fails, or the adjustment device is improperly set. Clean the impurities inside the valve to ensure that the valve disc can move freely. Check the elasticity of the spring, and replace the spring if it fails. Readjust the adjustment device to ensure that the valve disc can close at the expected speed and time.
  - **Serious Water Hammer Phenomenon:** It may be that the slow-closing time is unreasonably set or the diaphragm has abnormal functions. Readjust the adjustment device to extend the slow-closing time and observe whether the water hammer phenomenon improves. If the diaphragm has abnormal functions, replace the diaphragm and debug the valve again.

### **Performance Characteristics**

1. **Slow-closing Function:** Effectively prevents the generation of water hammer, protects the pipeline system and equipment from the impact and damage of water hammer, and improves the stability and reliability of the system.
2. **Good Noise-eliminating Effect:** The special structural design can reduce the noise

generated when the water flows through the valve, creating a quiet working environment.

3. **Reliable Sealing Performance:** Using high-quality sealing materials and a reasonable sealing structure, it ensures that the valve has good sealing performance in the closed state and prevents the leakage of the medium.
4. **Convenient Adjustment:** Through the adjustment device, the slow-closing time and closing speed of the valve disc can be flexibly adjusted according to the actual working conditions to adapt to different working conditions.
5. **Wide Range of Applications:** It can be applied to various water supply and drainage systems, fire protection systems, and industrial pipeline systems, etc., to effectively control the flow direction of the medium.
6. **Long Service Life:** The high-quality materials and reasonable structural design make the valve have high strength and wear resistance, and it can maintain good performance during long-term use.

