



Fluid Control Valves

Safety Precautions

Be sure to read this section before use.
Read safety precautions for "Fluid control valves (RJ-013AA)" as well

Product-Specific Cautions: Poppet diaphragm valve SPD Series

Design / Selection

⚠ WARNING

- This product cannot be used as an emergency shut-off valve.

It is not designed to function as a safety valve, such as an emergency shut-off valve. When using in such a system, always take separate measures that will ensure safety.

- Incorrect equipment selection and handling can cause problems not only in this product, but also to your system. For component selection and handling, it is the customer's responsibility to check the specifications of this product and the compatibility with your system before use.

- Take measures to prevent physical harm or property damage in the event of breakdown of this product.

■ Liquid ring

When the valve opens and closes, the diaphragm moves up and down, which causes the flow path capacity to change inside the valve. For this reason, if the fluid is an incompressible fluid (liquid), extreme pressures will be created in the valve when operating under conditions that seal the fluid in the valve (liquid ring). In this case, install a release valve on the primary or secondary side of the valve, preventing a liquid ring circuit from forming.

■ Working fluids

Check the compatibility of product component materials and working fluids.

■ Fluid temperature

Use within the specified fluid temperature range.

■ Fluid pressure range

Use within the specified working pressure range.

- Iron rust and debris in the fluid can cause operation faults or leaks and deteriorate product performance. Provide measures to remove foreign matter.

■ Use in high temperatures and steam

When hot fluid flows during steam sterilization, the valve body becomes hot, so do not touch with your hand or body. There is a risk of burns if these coils are touched directly.

⚠ CAUTION

- Rapid changes in fluid temperature may cause internal leakage.

- While the upper side of the diaphragm (actuator side) does not come into contact with the fluid, due to changes in fluid type and fluid temperature, fluid may permeate and turn into fluid atmosphere.

- As for compressed air for actuator operation, use air or inert gas passed through a filter with a filtration rating of 5 μm or more.

- If the product has been out of use for one month or more, perform a test run before starting actual operation.

- When the product will not be used for one month or more, completely remove any water left in the product. Water residue will cause rusting and may lead to malfunction or leaks. If residual water cannot be eliminated, operate the valve several times a day and pass water through to ensure ideal use.

- When the operating air supply time or exhaust time is short, the valve actuation may be unable to keep up.

- Do not allow fluid to come into contact with the product body.

- Water hammer and vibration may occur in certain fluid pressure and piping conditions. In most cases, this can be resolved by adjusting the open-close speed using a speed controller, etc. If a problem persists, review and revise the fluid pressure and piping conditions.

- Do not use valves as a footing or place any heavy objects on top of the valves.

- Use the operating air pressure within the specified working pressure range.

- Observe the operating frequency. Operating frequency is 30 cycles/min or less.

MEMO

For cautions for mounting, installation, adjustment, use and maintenance, refer to the CKD components Product Site (<https://www.ckd.co.jp/kiki/jp/en/>) → "Model No.→ [Instruction manual](#) for details.