



Safety precautions

Fluid Control Components: Warnings and Cautions

Be sure to read this section before use.

Precautions for each model series: product-specific cautions

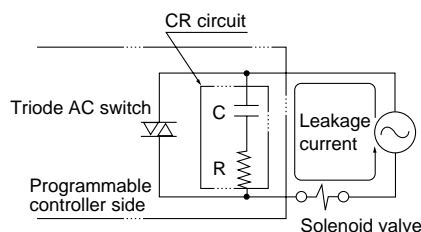
Pilot operated solenoid valve SPK Series for steam

CAUTION Design/selection

Leakage current from other fluid control components

- When operating the solenoid valve with a programmable controller, etc., check that the output leakage current from the programmable controller is within the following specifications.

Voltage Model No.	AC	
	100 V	200 V
SPK	6 mA or less	3 mA or less



CAUTION Mounting, installation and adjustment

Mounting

- As a general rule, the mounting orientation is vertical, with the coil on top.

Piping

- If the pipe vibrates when the solenoid valve is opened and closed, securely fix the piping.
- Steam generated from a boiler will contain a large amount of drainage. Always install a drain trap.
- When passing steam, the make-up water in the boiler will contain substances such as "calcium salt" and "magnesium salt". As these substances will react with oxygen and carbon dioxide, and cause scales and sludge to form, always install a "water softener" and a filter for steam.

- When the regulator and solenoid valve are directly coupled, the parts could mutually vibrate, causing resonance and chattering.
- If the piping cross-sectional area on the fluid inlet is reduced, the operation may become unstable due to differential pressure failure during valve operation. For the fluid inlet, use piping of a piping size that matches the port size of the valve. Do not use a needle valve.

CAUTION Use/maintenance

Sudden leakage

- With the pilot operated or pilot kick 2-port valve, if the pressure is suddenly applied while the valve is closed, the valve may open for an instant causing fluid to leak. Caution is required during use.

Operation

- Do not apply back pressure. This could lead to malfunction.

Thermal insulation cover

- Use an insulating cover structure that can be disassembled for maintenance purposes. Avoid placing an insulating cover on the entire solenoid valve or on the coil section. The coil could burn.

Tightening torque

- When disassembling or assembling, tighten the body bolt, core assembly and nut with the following tightening torques. When tightening body bolts, do not tighten each bolt in one go; instead, take several turns to complete the tightening of each bolt, tightening the bolts across from each other. After the assembly is completed, apply steam pressure to check for leakage.

		Body bolt tightening torque	Core assembly tightening torque	Nut tightening torque
SPK11	15A 20A	7 to 8 Nm	50 to 80 Nm	8 to 16 Nm
	25A	15 to 19 Nm		