



Vacuum Pressure Control System

# To Use This Product Safely

Be sure to read this before use.  
For General Precautions refer to Intro 9.

Individual Precautions: Vacuum pressure control system IAVB Series

## Design / Selection

### 1. Confirmation of Specifications

#### Danger

- Do not use in locations where hazardous materials such as ignitable, flammable, or explosive substances are present. There is a possibility of ignition, fire, or explosion.
- This product is not waterproof. Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.
- Be sure to use a DC stabilized power supply (24 VDC  $\pm$ 10%). Direct connection to an AC power supply can cause fire, bursting, damage, etc.

#### Warning

- Incorrect equipment selection and handling can cause problems not only in this product, but also to your system. Please be sure to confirm the specifications of this product and its compatibility with your system before use.
- Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.
- Install indoors with low humidity.  
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
- Use and store in accordance with the working/storage temperatures and where there is no condensation.  
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.
- Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. Additionally, chemical resistance has not been considered.  
This can cause failure, explosion, or fire.
- Use and store in a location free from strong electromagnetic waves, ultraviolet rays, and radiation.  
This can cause malfunction or failure.

#### Caution

- While wiring, ensure that inductive noise is not applied and that high-current or strong magnetic field locations or large motor power lines for other devices do not use the same piping and wiring (through multi-core cables, etc.). Also, pay attention to the inverter power supply and wiring section used for robots, etc. (same wiring and piping not possible). Apply frame grounding for the same power supply and always insert a filter at the output section.
- When surge-generating inductive loads or power supplies of product output and solenoid valve/relay, etc., are common, the surge current flows around the output part and may cause damage. Separate the inductive load output system from the output power supply of the product. If a separate power supply cannot be used, connect surge absorbers directly in parallel with all inductive loads.
- Do not disassemble the product.
- Cable cannot be used for applications involving repeated bending.
- Fix the cable so that it does not move easily. Do not bend the cable at an acute angle when fixing.

### 2. Working fluids

#### Caution

- This product is designed for controlling vacuum or inert gas. If other fluids (active gas, liquids, solids, etc.) pass through, the product may fail to operate normally or may display decreased performance. Check the compatibility between the gas contact part materials and working fluid before use. If there is a risk of solidification of the working fluid, confirm that this poses no problems during use.
- Avoid using fluids that build up crystallization in the piping.

### 3. Mounting

#### Warning

- Use the supplied cable between the valve and the controller, and install so that excessive force is not applied and it is not scratched. Do not remodel the attached cable (change the length or material) as it may cause malfunction, failure or misoperation.
- When the power supply is cut off (including failures), take sufficient measures to protect workers and equipment.  
There is a risk of unexpected accidents.

### 4. Securing Space

#### Caution

- Secure sufficient space for maintenance and inspection.

### 5. Piping

#### Caution

- The bellows interior is directly connected to the atmosphere. Do not block the connecting hole between the bellows interior and the atmosphere (2 holes just under the operating port) in use.
- When piping, do not apply tension, compression, bending or other forces to the valve body from the piping.
- When executing the auto-learning function, set the valve to its atmospheric pressure state. There is a possibility of misrecognition of the origin.
- Do not bring objects such as rare earth magnets that emit powerful magnetic fields near the product body. It may not be possible to maintain the original accuracy.
- Perform piping so no excessive force is applied to the flange. If heavy objects and mounted components vibrate, fix so that torque is not applied directly to the flange.

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

AGD	OGD	MGD	LGD	High Durability	Other Gas Components	PGM	IAGD	AVB	MVB	IAVB
	Process Gas Valve					Regulator	Integrated System	High Vacuum Valve		