



Safety Precautions

Be sure to read this section before use.

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.

It is important to select, use, handle and maintain the product appropriately to ensure that the CKD product is used safely.

Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.



WARNING

- 1** This product is designed and manufactured as a general industrial machine part.
It must be handled by an operator having sufficient knowledge and experience.
 - 2** Use this product in accordance with specifications.
This product must be used within its stated specifications. In addition, never modify or additionally machine this product. This product is intended for use in general industrial machinery equipment or parts. It is not intended for use outdoors (except for products with outdoor specifications) or for use under the following conditions or environments.
(Note that this product can be used when CKD is consulted prior to its usage and the customer consents to CKD product specifications. The customer should provide safety measures to avoid danger in the event of problems.)
 - ①** Use for applications requiring safety, including nuclear energy, railways, aircraft, marine vessels, vehicles, medical devices, devices or applications in contact with beverages or foodstuffs, amusement devices, emergency cutoff circuits, press machines, brake circuits, or safety devices or applications.
 - ②** Use for applications where life or assets could be significantly affected, and special safety measures are required.
 - 3** Observe organization standards and regulations, etc., related to the safety of device design and control, etc.
ISO4414, JIS B 8370 (Pneumatics fluid power - General rules and safety requirements for systems and their components)
JFPS2008 (Principles for pneumatic cylinder selection and use)
Including the High Pressure Gas Safety Act, Industrial Safety and Health Act, other safety rules, organization standards and regulations, etc.
 - 4** Do not handle, pipe, or remove devices before confirming safety.
 - ①** Inspect and service the machine and devices after confirming safety of all systems related to this product.
 - ②** Note that there may be hot or charged sections even after operation is stopped.
 - ③** When inspecting or servicing the device, turn OFF the energy source (air supply or water supply), and turn OFF power to the facility. Discharge any compressed air from the system, and pay attention to possible water leakage and leakage of electricity.
 - ④** When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.
 - 5** Observe warnings and cautions in the following pages to prevent accidents.
- The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.



DANGER: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, and when there is a high degree of emergency to a warning.



WARNING: If handled incorrectly, a dangerous situation may occur, resulting in death or serious injury.



CAUTION: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation.
Every item provides important information and must be observed.

Warranty

- 1** **Warranty period**
The product specified herein is warranted for one (1) year from the date of delivery to the location specified by the customer.
- 2** **Warranty coverage**
If the product specified herein fails for reasons attributable to CKD within the warranty period specified above, CKD will promptly provide a replacement for the faulty product or a part thereof or repair the faulty product at one of CKD's facilities free of charge. However, following failures are excluded from this warranty:
 - 1) Failure caused by handling or use of the product under conditions and in environments not conforming to those stated in the catalog, the Specifications, or the Instruction Manual.
 - 2) Failure caused by use of the product exceeding its durability (cycles, distance, time, etc.) or caused by consumable parts.
 - 3) Failure not caused by the product.
 - 4) Failure caused by use not intended for the product.
 - 5) Failure caused by modifications/alterations or repairs not carried out by CKD.
 - 6) Failure caused by reasons unforeseen at the level of technology available at the time of delivery.
 - 7) Failure caused by acts of nature and disasters beyond control of CKD.The warranty stated herein covers only the delivered product itself. Any loss or damage induced by failure of the delivered product is excluded from this warranty.
Note: For details on the durability and consumable parts, contact your nearest CKD sales office.
- 3** **Compatibility check**
The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

Design / Selection

⚠ WARNING

- This product is a pneumatic aiding device designed to be used as a mechanical device with a jig, attachment, etc., mounted to the device's tip of the transport section. When using this product, please be sure to conduct a risk assessment of the entire machine or device to ensure its safety before use. In addition, the end user should perform a risk assessment on the user side based on residual risk information for the machine overall, and stipulate a safe operating method for use.

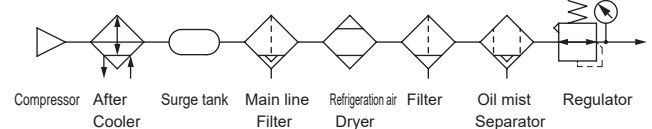
⚠ CAUTION

- Do not disassemble, as it could impair the original performance and accuracy. For an overhaul, contact a CKD representative.
- Although a cushion rubber is mounted at the end of the rotating section to regulate the angle of rotation, hitting the arm against the cushion rubber with more force than necessary may result in damage to both sides. Do not use the arm in such a way as to cause it to collide with the end of the rotating section.
- Although the rope is strong enough, there is a risk of breaking due to rubbing or scratches. Refer to "Maintenance parts" for replacement.

[Pneumatic source]

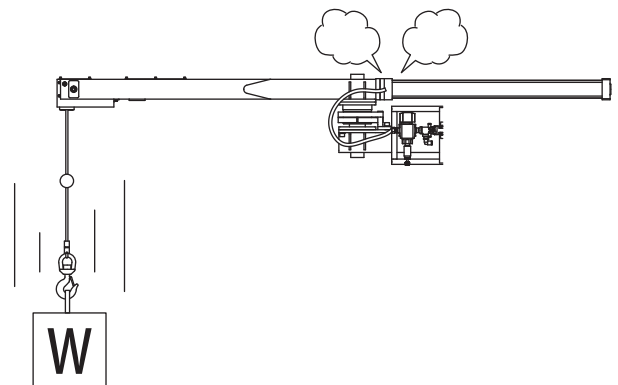
- Use pneumatic pressure supplied to the flexible arm in the range of [Required pressure for transport] + 0.1MPa to [0.5MPa]. For the pressure required for load, refer to the graph of "Load capacity under pressure".
- The supply air is clean air ([standard air circuit] compressed air quality class: 1.5.1 to 1.6.1 or equivalent).

Standard air circuit



[Pneumatic piping]

- If the pneumatic piping is dislocated during use, the workpiece may fall, creating a hazard. Connect with reliable methods to prevent the pneumatic piping from dislocating.



Use / Maintenance

1. FAW Series

WARNING

- If vibrations, noise, or other abnormalities occur, first assure your own safety, and then stop the work. A fatal accident or total damage to the device may occur.
- Do not modify the product or device without the manufacturer's approval.
- Do not put hands or fingers into product or device gaps.
- When lifting a load at the tip of the device (including mounted attachments, jigs, etc.), do not hoist the load in such a way that it will be lopsided or uneven so as to tip over.
- Do not use air pressure or heavy objects outside the specifications, perform sudden operations, or tilt the unit up and down.
- If air is shut off while the tip of the device is raised, it will gradually fall over time. After use, be sure to remove any heavy objects and lower the tip to the lowest level.
- During work or transport operation, never move away from the product or device.
- Do not hang or climb onto the device. Otherwise, there is a risk of overturning or damage.
- If the air in the supply source or the piping such as a hose is dislocated while a heavy object is suspended, the heavy object will stop on the spot. However, if the heavy object is left in the suspended state, it will gradually fall.

CAUTION

- For maintenance and inspection, remove any heavy objects with the air cut OFF.
- If you have any questions regarding handling, repair, or replacement parts, etc., contact your supplier.

2. FAW Floor mounted

WARNING

- Refer to "Mounting and Installation" and insert the specified anchor.

3. FAW Dolly mounted

- Use on a firmly paved, flat surface.
- Do not move the dolly when the tip part (including mounted attachments and jigs, etc.) is carrying transported items.
- After installation, secure the cart to the floor with angles, etc.

4. FAW Column mounted

WARNING

- Refer to "Mounting and Installation" for details. Fix the columns to the specified columns.

5. FAW Ceiling mounted

WARNING

- Refer to "Mounting and Installation" to fix the unit in place.