Safety precautions

■ Design/selection

⚠ WARNING

- This cylinder has been designed to simultaneously perform positioning and clamping of the workpiece. Do not use it for other applications, as this may cause accidents, damage to the cylinder, etc.
- If fingers may be caught in the clamp lever, install a protective cover, etc.
- When the circuit pressure drops due to power outage or problems in the air source, the clamping force drops, which may cause the workpiece to fall out depending on the mounting orientation of the product. Provide a position locking cylinder or safety measures on the device so that personnel are not injured or machines damaged.
- When mounting this cylinder to a transport robot or the like, it may not be possible to maintain clamping force due to the weight of the workpiece to be transported, inertial force during transportation, etc. Provide scattering protection to the workpiece as required upon considering the weight and inertial force of the workpiece to be transported.

PCC-Q (position locking) only

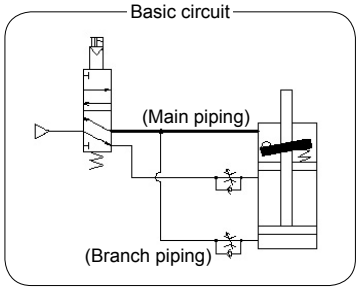
- Cylinder with position locking mechanism (for holding clamping position).
  Emergency stops (while in operation) can significantly decrease the service life.
- If back pressure is applied to the locking mechanism, the lock may be released. Use a discrete valve, or use an individual exhaust manifold.
- When unlocking, make sure to supply pressure to the clamp (rod) side port, and check that load is not applied to the lock mechanism before unlocking.
- Due to the structure, the clamp lever moves by about 1 mm when the lock is applied.

⚠ CAUTION

- Set the clamping of the workpiece within the clamp stroke range.
- When using this product in the welding process, be sure to ground to avoid current leading to the product.

PCC-Q (position locking) only

- Arrange the air piping of this cylinder (position locking) as shown in the figure on the right.
  Arranging the pipes differently from the figure at right, such as piping the position locking part as a single unit, may cause problems such as delayed response.
  · Be sure to branch the piping of this cylinder after the valve into the position locking part (main piping) and cylinder part (branch piping) as shown in the figure on the right.
  · Be sure to design the piping so that the lock is released before the cylinder starts operating. Failure to do so may prevent unlocking or cause the piston rod to jump out.



■ Use/maintenance

⚠ WARNING

PCC-Q (position locking) only

- Do not lubricate the lock, as this may cause the holding force to decrease.
- Do not disassemble the lock, as doing so may be dangerous.
- Always use the product with the dust cover on, except for when performing manual release, in order to prevent failure or malfunction.

⚠ CAUTION

- Remove spatter from the product upon removing the plug (R3/8) of the product side cleaning hole. During work, protect the piston rod sliding surface from scratches and dents.
- Locating pin and clamp lever are repair parts. Using an abraded locating pin or clamp lever may cause the position of the workpiece to be shifted while clamping or prevent proper clamping.

PCC-Q (position locking) only

- When locking the first time after leaving the lock released for a long time, a delayed response may occur in the lock. Do not leave the lock pressurized, and operate the lock at each cylinder operation.
- If no air pressure is supplied in vertical downward mounting, etc., holding force may not be sufficient when the lock is manually released. This may cause the clamp to release and the workpiece to fall from its own weight.