Product-specific cautions: Quick valve 2QV/3QV Series

Design/selection

⚠WARNING

- Use the product within specifications.
  Use with fluid other than compressed air or at a pressure or temperature exceeding the specifications could result in rupture, tube dislocation, or leakage.
- Avoid installing this product outdoors or where it is exposed to direct sunlight.

⚠CAUTION

- Confirm before use that the product will withstand the working environment.
  - This product cannot be used in environments where functional obstacles could occur.
    Such environments include high temperatures, chemical atmospheres, or where chemical liquids, vibration, moisture, dripping water, or gases are present. Environments where ozone is generated. Outdoors or where the product could be subject to direct sunlight; or where cutting oil, coolant, or spatter could come in contact or where static electricity could pose a problem.
- Confirm whether PTFE can be used.
  - The sealant contains PTFE (tetrafluoroethylene resin) powder. Check that this poses no problem during use.
- Consult with CKD if ozone is generated in the supplied air. (Ozone-proof products are available.)
- Avoid using this product in a hot humid place, outdoors or where it is subject to direct sunlight.

Mounting, installation and adjustment

⚠WARNING

- Securely insert the tube until it contacts the fitting tube end, and check that it does not come off the fitting.
- Stop air flow and confirm that there is no residual pressure before replacing the tube.

Piping

⚠CAUTION

- Observe the following precautions when using nylon tubes or urethane tubes for piping material.
  - Use the designated tube and CKD plastic plug (GWP Series). Do not use a metal plug as doing so may cause problems.
    Tube outer diameter accuracy
    · Polyamide tube.....Within ±0.1 mm
    · Polyurethane tube
    (ø6 or less).....Within ±0.1 mm
    (ø8 up).....Within $^{+0.1}_{-0.15}$ mm
    Use a tube with hardness of 92˚ or more. If a tube that does not satisfy the diameter accuracy or hardness is used, the chucking force may decrease, the tube may come off or be difficult to insert.
    Contact CKD when using a non-designated tube or plug.
  - Cut the tube with a dedicated cutter and always at a right angle.
  - Use the tubing so that it does not become worn or damaged. Tubing could collapse or rupture.
  - A used tube could be deteriorated or deformed and so always use a new tube.
  - Do not let the tube directly contact other surfaces, as there is a risk of wear or damage.
- Do not use this product for applications involving constant rotation or oscillations, or in which tubes move violently.
- Use the tubing so that it is within the min. bending radius and long enough to avoid sharp bends.
  - Consider changes in tubing length caused by pressure when tubing is connected, and provide sufficient length within the min. tube bending radius.
- Always flush just before piping pneumatic components.
  - Any foreign matter that has entered during piping must be removed so it does not enter the pneumatic components. Remove all swarf and foreign debris generated during piping and tube insertion before use.
- When supplying compressed air after connecting pipes, do not suddenly apply high pressure.
  - The pipe connection could dislocate, causing the pipe tube to fly out, leading to accidents.
- After connecting piping, always check all pipe connections for air leaks before supplying compressed air.
  - Apply a leakage detection agent on pipe connections with a brush, and check for air leaks.
- Handling push-in fittings and tubes
  - For handling of push-in fittings and tubes, refer to Warnings and Cautions of fittings/tubes (CB-024SA General Pneumatic Auxiliary Components).

Mounting, installation and adjustment

⚠CAUTION

■ Use appropriate torque to tighten the pipes when connecting them.

● The purpose is to prevent air leakage and damage to bolts. First tighten the bolts by hand to ensure that the threads are not damaged, then use a tool.
Check that the tool's hexagon face and wrench are the correct size.
[Reference value]

Port thread	Tightening torque N·m
R1/8	3 to 5
R1/4	6 to 8
R3/8	13 to 15
R1/2	16 to 18

* The above values apply when partner threads are JIS B 0203 piping tapered female threads (material C3604BD).

■ Connect piping so that connections are not dislocated by equipment movement, vibration, tension, etc.

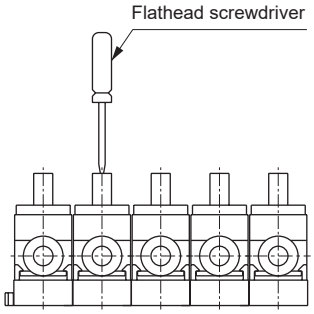
● Control of actuator speed will be disabled if piping on the exhaust side of the pneumatic circuit is disengaged.
● When using the chuck holding mechanism, the chuck may be released, creating a hazardous state.
● Confirm that the tube has been inserted properly, and make sure that there is no tension during use.
The tube could be dislocated or damaged if there is any tension.

■ Make sure that there is no torsion, tension or moment load applied to the fitting or the tube.

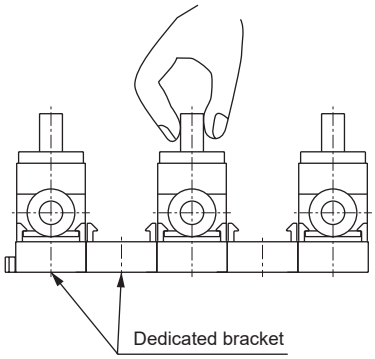
■ Do not tighten while pressure is applied.

■ When using a urethane rubber tube (U-95□□, NU-□□) for vacuum, use an insert ring.

■ If the manifold is installed with a focus on space-saving, manual operation may be difficult. Operate by inserting a screwdriver, etc., into the slot on the top of the knob.



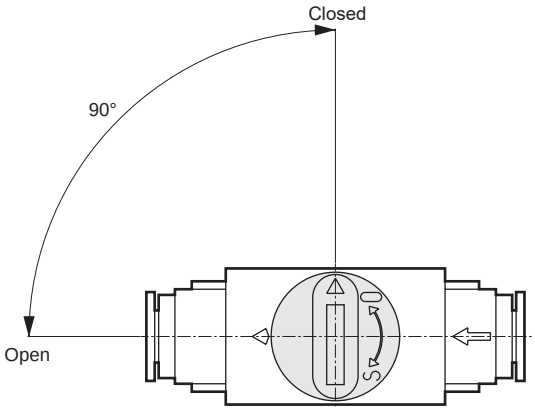
■ If manifolds are installed with a priority on manual operation, valves can be operated easily by installing them with spaces in between.



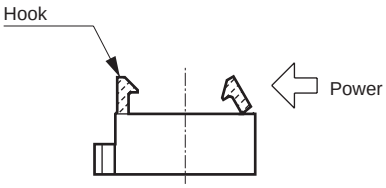
Use/maintenance

⚠CAUTION

■ Operating angle of this product is 90˚.
Do not turn the product more than 90˚.

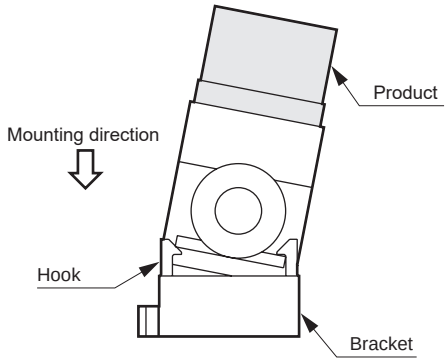


■ The dedicated bracket's hooks can be damaged by external force. Use with the proper means.

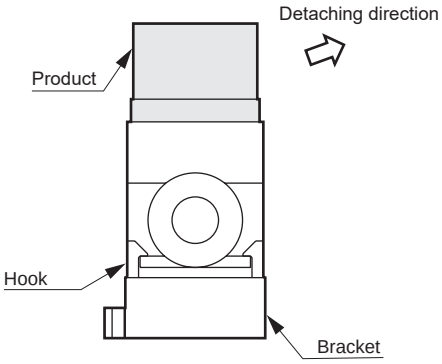


■ How to use bracket

(1) Fix the bracket before use. To mount, insert the product at a slant into the bracket, and then fit into hooks.



(2) To remove the product, tilt it slightly to the side, and release one hook.



(3) When mounting the manifold, insert the bracket projection into the other bracket's groove.