

## Handling Precautions

4G-series

### In-stop valve spacer Air supply spacer Exhaust spacer

Thank you for purchasing of CKD's product.

For safe operation of this product, strictly observe the following cautions.

**After reading this manual, keep it in a safe place where all concerned personnel can refer to it immediately.**

**CAUTION!! Do not unpack the package bag until the piping work is started.**

If any foreign matter enter, this may cause fault or malfunction to the product.

## Piping and mounting

### WARNING

- When connecting the pipes, tighten the screws with a proper tightening torque. If not tightened properly, this may cause air leakage or break the screw.

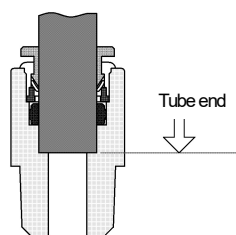
#### Tightening torque

Connection screw	Tightening torque N·m	Connection screw	Tightening torque N·m
M5	1.0~1.5	Rc1/4	6~8
Rc1/8	3~5	Rc3/8	13~15

- Before starting the piping work, always blow the air to the inside of the piping (flushing) or clean the inside of the piping to remove cutting chips, coolant, and dusts.
- When winding a seal tape, wind it from the position 2 mm or more away from the top of the screw in the screw threading direction. If the seal tape is projected from the top of the pipe screw thread, the seal tape may be cut by screwing in the pipe and such cut dust may enter the valve, causing malfunction to the valve.

### Push-in joint (Air supply spacer, Exhaust spacer)

- Always insert the tube firmly until it is in contact with the tube end. Before using the push-in joint, pull the tube lightly (approximately 20N) to make sure that it is not disconnected. If the tube is not inserted into the far position firmly, this may cause disconnection of the tube or air leakage.
- Before using the tube, cut the tube straight with the special cutter.
- Carry out the piping work carefully so that the bending radius of the tube is the minimum bending radius or more to give a sufficient allowance.



#### Minimum bending radius of tube

Diameter of tube mm	Minimum bending radius mm	
	Nylon	Urethane
φ4	10	10
φ6	20	20
φ8	30	30
φ10	40	40
φ12	55	50

### Manual override (In-stop valve spacer)

The manual operation shuts down the air supply from the manifold and releases the residual pressure at the same time.

#### Operating procedures

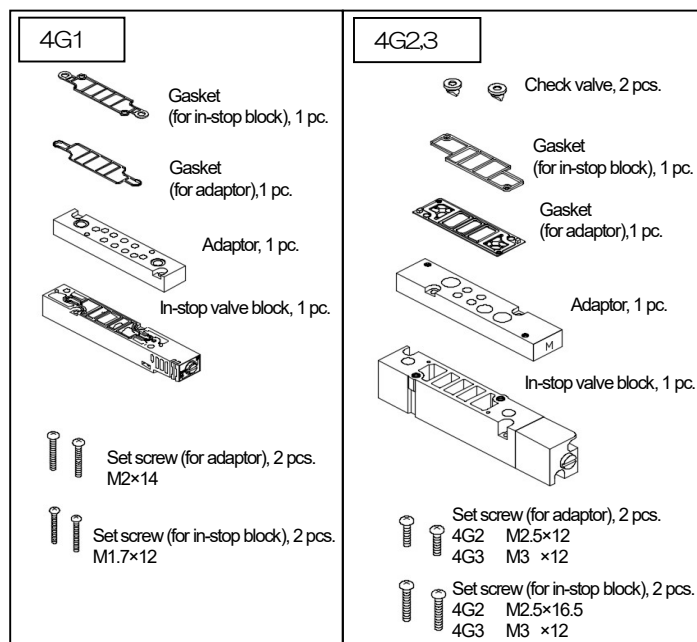
- Push-lock operation  
After pushing the manual button until it is in contact with the far position, turn the manual button clockwise 90° to lock it.
- If the manual button is turned without pushing, this may break the manual override or cause air leakage.

## Assembling the spacer

- Before removing the solenoid valve main body, release the air supply pressure of the manifold.
- When removing the solenoid valve main body, pay special attention so that any gaskets or check valves will not be lost.

### ◇ In-stop valve spacer

#### 《Included parts》



#### 《Mounting procedures》

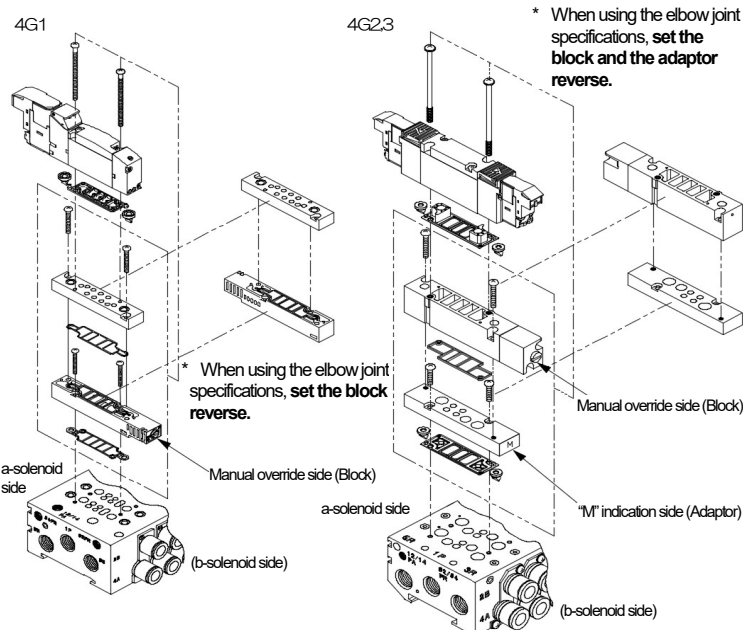
- Release the pressure to the manifold.
- Remove the solenoid valve at the position where the spacer is to be installed.
- Set the parts and components as shown in the Fig. below, and tighten the screws.

#### Screw tightening torque

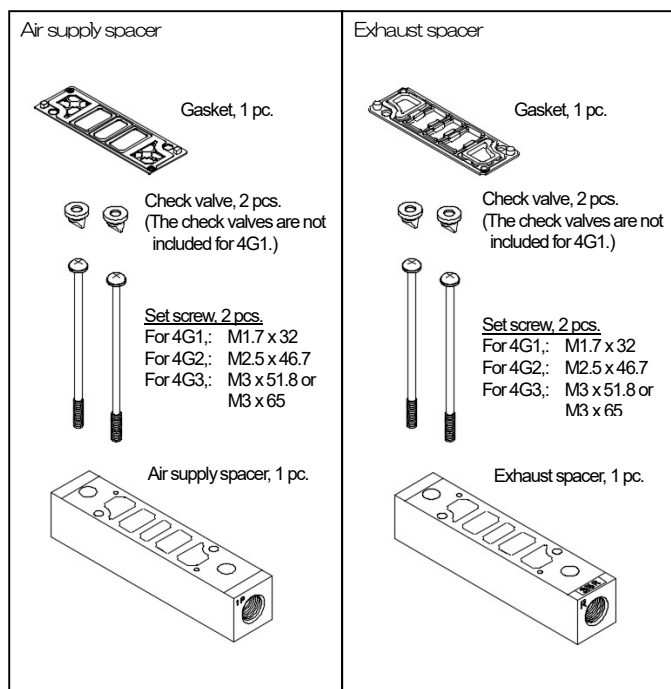
4G1: M1.7 0.19 to 0.21 [N·m], M2 0.26 to 0.28 [N·m]

4G2: M2.5 0.25 to 0.30 [N·m]

4G3: M3 0.55 to 0.65 [N·m]

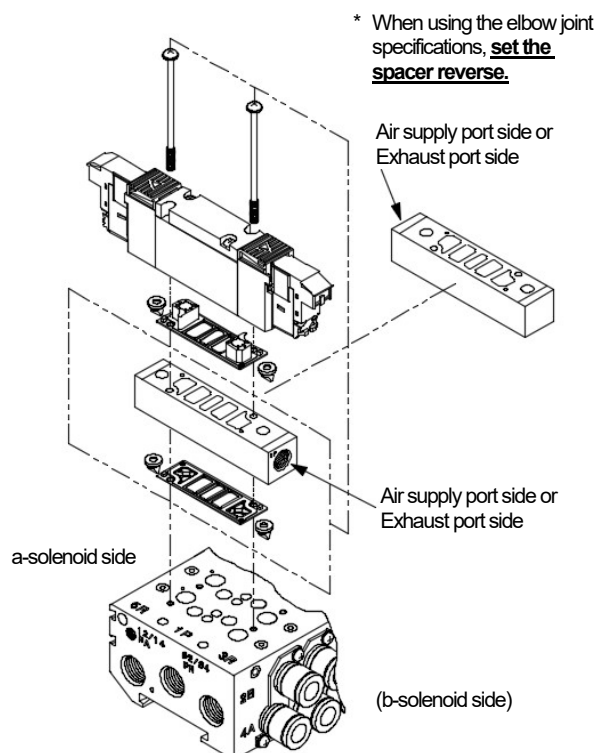


◇ Air supply spacer, Exhaust spacer  
 《Included parts》



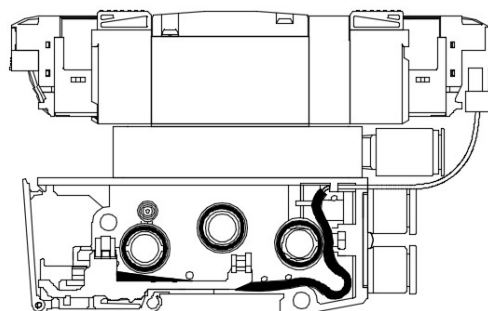
《Mounting procedures》

1. Mount the joint to the air supply port or the exhaust port of the spacer.
  2. Release the pressure to the manifold.
  3. Remove the solenoid valve at the part where the spacer is to be installed. (These screws will not be used to mount the spacer.)
  4. Set the parts and components as shown in the Fig. below and tighten the screws.
- Screw tightening torque
- 4G1: 0.19 to 0.21 [N·m]  
 4G2: 0.50 to 0.55 [N·m]  
 4G3: 0.60 to 0.70 [N·m]



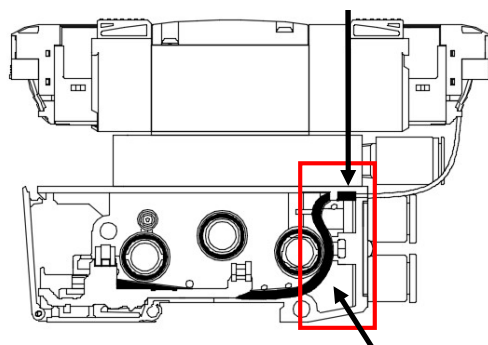
b-solenoid side (manifold base joint side) for reduced wiring type block manifold when mounting the 3-position valve, follow the work steps below to connect the connector. (For details about block disassembly work, see catalogue and instruction manual for the manifold.)

**Before work**



**After work**

Move the end of sheath to this position.



Put the electric wires in this area again so that they can reach to the connector.

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For dealer information, refer to our catalog or visit our website.  
<http://www.ckd.co.jp/>

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