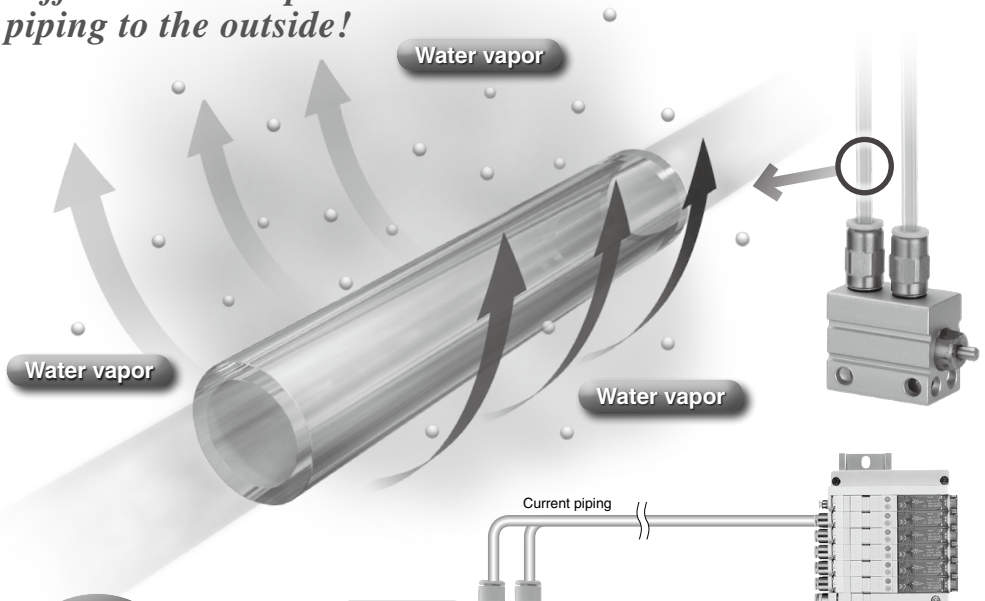
# Prevents condensation
## in piping
**for small cylinders/air grippers.**

***Diffuses water vapor in the piping to the outside!***

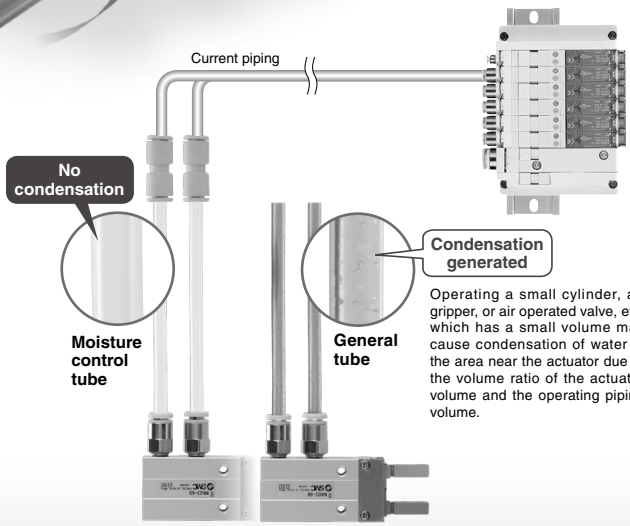
**Linear shape**
Suitable for applications where cylinders do not rotate.

**Coil shape**
Reduces tube buckling of moving part.




**Additional power supply and works are not necessary!**

**All you have to do is install the moisture control tube!!**




Operating a small cylinder, air gripper, or air operated valve, etc. which has a small volume may cause condensation of water in the area near the actuator due to the volume ratio of the actuator volume and the operating piping volume.

# Prevents condensation issue with pneumatic equipment.

## If condensation occurs...

**Grease deteriorates or is washed away.**

**Operation failure**

### Shorter life

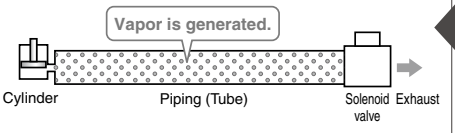
Air quality affects the operation and the life of the equipment in a pneumatic system, so dehumidified air is necessary. In particular, if small actuators are continuously operated at high frequency, condensation may be generated even with dehumidified air, due to the characteristics of the system. The moisture control tube prevents condensation from being formed by diffusing water vapor generated in the piping to the outside before the water vapor is condensed.

### The mechanism of condensation in small actuators

Supply

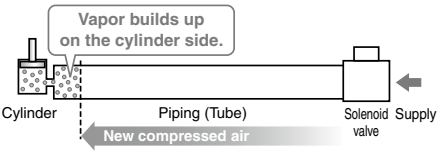
**Exhaust**

❶ The temperature in the piping rapidly drops due to adiabatic expansion.
❷ If the temperature in the piping becomes lower than the dew point of the compressed air, vapor will be generated.
❸ The vapor cannot be exhausted (cannot be pushed out) as the volume of the actuator is small.



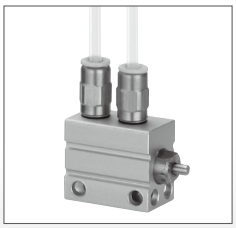

**Supply**

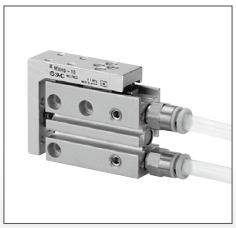
Residual vapor is pressed by compressed air and accumulates in the area near the actuator.

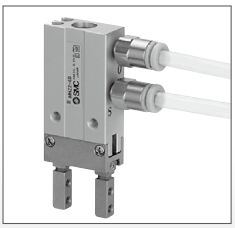



Equipment in which condensation is a possibility

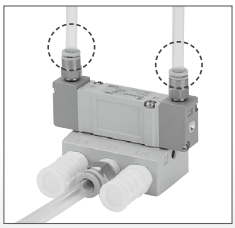
**Small diameter cylinders/air grippers**







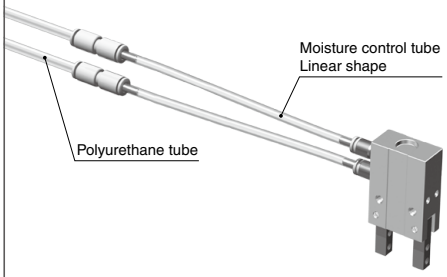
**Air operated valves (Pilot port)**



# Additional power supply and works are not necessary! Just by installing the moisture control tube prevents condensation.

## Linear shape

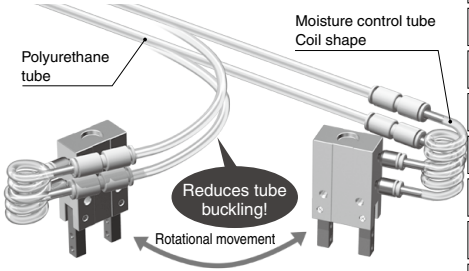
Suitable for applications where cylinders do not rotate.




| Model | | Tube O.D. | Tube effective length 100 | Tube effective length 200 |
|---|---|---|---|---|
| IDK02 | | ø2 | | |
| IDK04 | | ø4 | | |
| IDK06 | | ø6 | | |

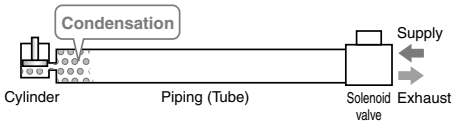
## Coil shape

Since other tubes with a small bending radius are used on moving parts, the buckling trouble of the moisture control tubes can be reduced.

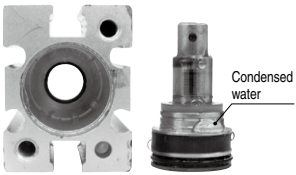



| Model | | Tube O.D. | Tube effective length 100 | Tube effective length 200 |
|---|---|---|---|---|
| IDK04 | 100 mm / 200 mm | ø4 | | |
| IDK06 | 100 mm / 200 mm | ø6 | | |

The accumulated vapor is liquefied (condensed) due to repeated supply/exhaust.



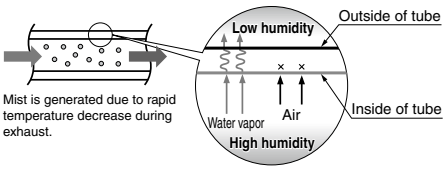

Water droplets




Grease deteriorates or is washed away.

## Operating principle of moisture control tube

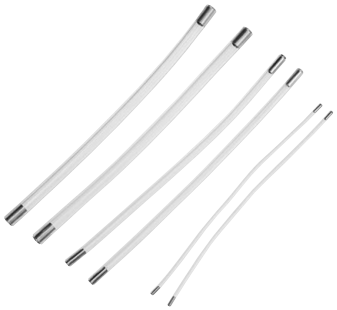
This moisture control tube has characteristics to balance the humidity inside the tube with that outside the tube. If the humidity inside the tube differs from that outside the tube, the moisture control tube penetrates the water vapor from the higher humidity side to the lower humidity side. The moisture control tube penetrates only the water vapor and rarely penetrates the air. The humidity inside the tube is put in the high humidity status due to the mist generated every exhaust, causing dew condensation. The moisture control tube penetrates the generated mist from the inside of the tube with a high humidity to its outside with a low humidity to prevent accumulation of water vapor and dew condensation inside the tube.




Mist is generated due to rapid temperature decrease during exhaust.

The water vapor is generated and it moves from the inside of the tube with a high humidity to its outside with a low humidity.

# Moisture Control Tube
# *IDK Series*



## Specifications (Linear Shape)

| Model | IDK02 | IDK04 | IDK06 |
|---|---|---|---|
| **Fluid** | Compressed air | | |
| **Max. operating pressure** | 0.7 MPa | | |
| **Installation temperature/Relative humidity** | 40°C/75%RH or less | | |
| **Operating temperature** | 0 to 60°C (No freezing) | | |
| **Operating environment**∗1 | Indoors, where product is not exposed to water (0 to 40°C, Relative humidity 0 to 75%RH) | | |
| **Min. bending radius**∗2 **[mm]** | 10 | 20 | 40 |
| **O.D. [mm]** | 2 | 4 | 6 |
| **I.D. [mm]** | 1.2 | 2.5 | 4 |
| **Quantity of moisture control tubes** | 2 pcs. | | |
| **Color** | Transparent (Color will change to brown over time, but the functions are not affected.) | | |
| **Applicable fittings** | KQ2 | | |
| **Material** | Fluoropolymer | | |

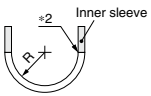
Note 1) Use the moisture control tube in a line with a refrigerated air dryer and a mist separator installed in the upstream compressed air line. The condensation prevention performance may be lowered depending on the quality of the supply compressed air (oil, dew point).

Note 2) The inner sleeve is already mounted and cannot be removed. If the inner sleeve comes off, re-insert the sleeve before mounting the fitting.

Note 3) Do not cut the tube.

∗1 Use the product in an operating environment where humidity is as low as possible.

∗2 The value at which the moisture control tube is bent or flattened at 20°C. Be careful not to bend or flatten the tube and the inner sleeve even if the value is more than the minimum bending radius.




## How to Order

**IDK 02 – 100**

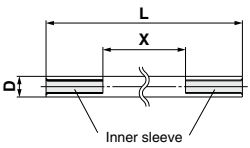
**Tube O.D.**

| Symbol | O.D. |
|---|---|
| **02** | 2 mm |
| **04** | 4 mm |
| **06** | 6 mm |

**Tube effective length**

| Symbol | Effective length |
|---|---|
| **100** | 100 mm |
| **200** | 200 mm |

## Dimensions




Unit: mm

| Model | O.D. x I.D. D | Nominal effective length X | Full length L |
|---|---|---|---|
| **IDK02-100** | 2 x 1.2 | 100 | 120 |
| **IDK02-200** | | 200 | 220 |
| **IDK04-100** | 4 x 2.5 | 100 | 140 |
| **IDK04-200** | | 200 | 240 |
| **IDK06-100** | 6 x 4 | 100 | 140 |
| **IDK06-200** | | 200 | 240 |

Note) Dimensions at 40% relative humidity. Dimensions may change if the relative humidity changes.

### Made to Order

If you require the moisture control tube with an effective length not listed in the above table, please contact SMC.

## Specifications (Coil Shape)

| Model | IDK04-□-C1 | IDK06-□-C1 |
|---|---|---|
| **Fluid** | Compressed air | |
| **Max. operating pressure** | 0.7 MPa | |
| **Fluid temperature** | 0 to 60°C (No freezing) | |
| **Ambient temperature** | 0 to 40°C, Relative humidity 0 to 75%RH | |
| **Operating environment**∗1 | Indoors, where product is not exposed to water (0 to 40°C, Relative humidity 0 to 75%RH) | |
| **O.D. [mm]** | 4 | 6 |
| **I.D. [mm]** | 2.5 | 4 |
| **Tube effective length**∗2 **[mm]** | 100, 200 | |
| **Quantity of moisture control tubes** | 2 pcs. | |
| **Color** | Transparent (Color will change to brown over time, but the functions are not affected.) | |
| **Applicable fittings** | KQ2 | |
| **Material** | Fluoropolymer | |

Note 1) Use the moisture control tube in a line with a refrigerated air dryer and a mist separator installed in the upstream compressed air line. The condensation prevention performance may be lowered depending on the quality of the supply compressed air (oil, dew point).
Note 2) The inner sleeve is already mounted and cannot be removed. If the inner sleeve comes off, re-insert the sleeve before mounting the fitting.
Note 3) Do not cut the tube.
∗1 Use the product in an operating environment where humidity is as low as possible.
∗2 The length when the tube is straight. This effective length is made into a coil shape.

## How to Order

**IDK 04 – 100 – C1**

**Tube O.D.**

| Symbol | O.D. |
|---|---|
| **04** | 4 mm |
| **06** | 6 mm |

Note) Part number for a set of 2 tubes

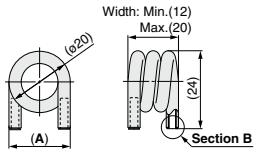
**Tube effective length**

| Symbol | Effective length |
|---|---|
| **100** | 100 mm |
| **200** | 200 mm |

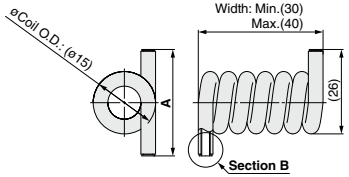
**Coil shape**

## Dimensions (per tube)

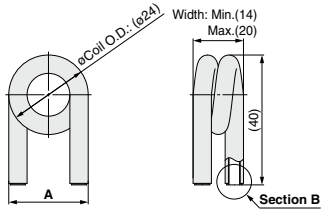
### IDK04-100-C1



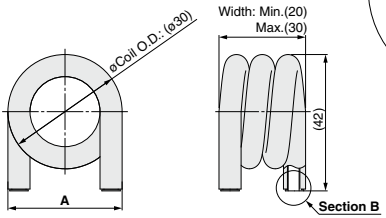

### IDK04-200-C1



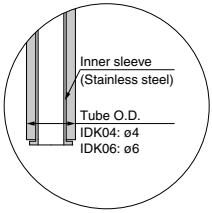

### IDK06-100-C1




### IDK06-200-C1




### Section B details




∗ Due to the material, the above dimensions may vary depending on the environment (temperature, humidity) including the spread of dimension A.

# *IDK Series*
# Table for Quick Selection

Refer to pages 198 and 199 for details of Model Selection.

**Basic conditions for selection**
- Supply air pressure: 0.5 MPa
- Supply air dew point: –20°C (Atmospheric pressure dew point)
- Ambient environment: Ambient temperature 25°C, Ambient humidity 40%

∗ If your operating conditions are different from these basic conditions, correct them based on "Model Selection".

## Single Piston

| Actuator size | | Piping condition | Recommended model | | | | | |
|---|---|---|---|---|---|---|---|---|
| Bore size [mm] | Stroke [mm] | Tube length [m] | Tube O.D. 2 mm | | Tube O.D. 4 mm | | Tube O.D. 6 mm | |
| | | | **IDK02-100** | **IDK02-200** | **IDK04-100 (-C1)** | **IDK04-200 (-C1)** | **IDK06-100 (-C1)** | **IDK06-200 (-C1)** |
| 2.5 | All strokes | 5 | ● | — | — | ● | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| 4 | All strokes | 5 | ● | — | — | ● | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| 6 | Less than 10 | 5 | ● | — | — | ● | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| | 10 or more | 5 | ● | — | ● | — | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| 8 | Less than 10 | 5 | ● | — | ● | — | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| | 10 or more | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | — | ● |
| 10 | Less than 10 | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | — | ● |
| | 10 or more | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | ● | — |
| 16 (15) | Less than 10 | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | ● | — |
| | 10 or more | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | ● | — |
| 20 | Less than 10 | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | ● | — |
| | 10 or more | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | ● | — |

## Dual Piston

| Series | Actuator size | | Piping condition | Recommended model | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Bore size [mm] | Stroke [mm] | Tube length [m] | Tube O.D. 2 mm | | Tube O.D. 4 mm | | Tube O.D. 6 mm | |
| | | | | **IDK02-100** | **IDK02-200** | **IDK04-100 (-C1)** | **IDK04-200 (-C1)** | **IDK06-100 (-C1)** | **IDK06-200 (-C1)** |
| **CXWM, CXWL (CXW□-25 or less)** | 10 | 25 | 5 | — | — | — | — | — | — |
| | | | 10 | — | — | — | — | ● | — |
| **MXQ** | 6 | 10 | 5 | ● | — | ● | — | ● | — |
| | | | 10 | ● | — | ● | — | — | ● |
| | Size larger than those above | | 5 | ● | — | ● | — | ● | — |
| | | | 10 | ● | — | ● | — | ● | — |
| **CXS, CXSJ** | 6 | 10 | 5 | ● | — | ● | — | ● | — |
| | | | 10 | ● | — | ● | — | — | ● |
| | Size larger than those above | | 5 | ● | — | ● | — | ● | — |
| | | | 10 | ● | — | ● | — | ● | — |

Note) If the piping is longer than the above tube length, the IDK□-200 may be necessary.

**Basic conditions for selection**
- Supply air pressure: 0.5 MPa
- Supply air dew point: –20°C (Atmospheric pressure dew point)
- Ambient environment: Ambient temperature 25°C, Ambient humidity 40%

∗ If your operating conditions are different from these basic conditions, correct them based on "Model Selection".

## Air Gripper

| Series | Bore size [mm] | Piping condition Tube length [m] | Recommended model | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tube O.D. 2 mm | | Tube O.D. 4 mm | | Tube O.D. 6 mm | |
| | | | **IDK02-100** | **IDK02-200** | IDK04-100 (-C1) | IDK04-200 (-C1) | IDK06-100 (-C1) | IDK06-200 (-C1) |
| **MHZA2, MHZAJ2** | 6 | 5 | ● | — | ● | — | — | ● |
| | | 10 | ● | — | ● | — | — | ● |
| **MHZ2, MHZJ2** | 6 | 5 | ● | — | ● | — | ● | — |
| | | 10 | ● | — | ● | — | — | ● |
| **MHC2** | 6 | 5 | ● | — | ● | — | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| **MHCA2** | 6 | 5 | ● | — | — | ● | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| **MHCM2** | 7 | 5 | ● | — | — | ● | — | ● |
| | | 10 | ● | — | — | ● | — | ● |
| Air gripper with bore size larger than those above | | — | ● | — | ● | — | ● | — |

## Rotary Actuator

| Series | Vane type | Size | Rotating angle | Piping condition Tube length [m] | Recommended model | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Tube O.D. 2 mm | | Tube O.D. 4 mm | | Tube O.D. 6 mm | |
| | | | | | **IDK02-100** | **IDK02-200** | IDK04-100 (-C1) | IDK04-200 (-C1) | IDK06-100 (-C1) | IDK06-200 (-C1) |
| **CRB□ CRBU2** | Single | 10 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 180 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 270 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | 15 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | Double | 10 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 100 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| **MSU□** | Single | 1 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 180 | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 90 | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | 3 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | Double | 1 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| **CRQ2** | — | 10 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 180 | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | | 90 | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| **MSQ□** | — | 1 | 90 | 5 | — | — | ● | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | 2 | | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |
| | | 3 | | 5 | — | — | — | — | ● | — |
| | | | | 10 | — | — | ● | — | ● | — |

Note) If the piping is longer than the above tube length, the IDK□-200 may be necessary.

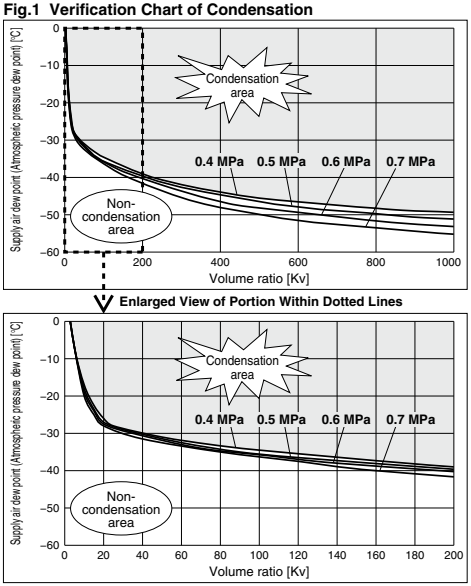
# *IDK Series*
# Model Selection

## Selection Procedure

### 1 Check the presence of condensation.

(1) The presence of condensation can be verified by the dew point and Kv value (the volume ratio of tube and actuator) of the supply air.

**Fig.1 Verification Chart of Condensation**




### Calculation method of volume ratio (Kv value)

Calculate the piping volume Vt and the actuator volume Vc and substitute them into equation ① below.

$$Kv = \frac{Vt}{Vc} \cdots ①$$

**Kv**: Volume ratio
**Vt**: Piping volume [mm³]
**Vc**: Actuator volume [mm³]

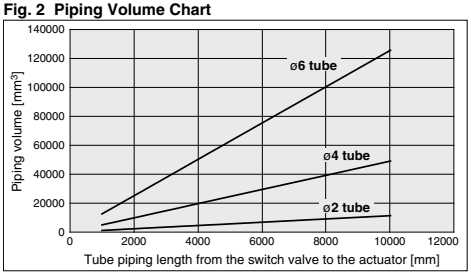
$$Vt = \frac{\pi d^2 l}{4}$$

**Vt**: Piping volume [mm³] [can be selected from piping volume chart in Fig. 2.]
**d**: Tube I.D. [mm]
**l**: Tube length [mm]
∗ Tube length means the tube piping length from the switch valve (e.g. solenoid valve) to the actuator.

$$Vc = \frac{\pi D^2 s}{4}$$

**Vc**: Actuator volume [mm³]
**D**: Bore size [mm]
**s**: Stroke [mm]

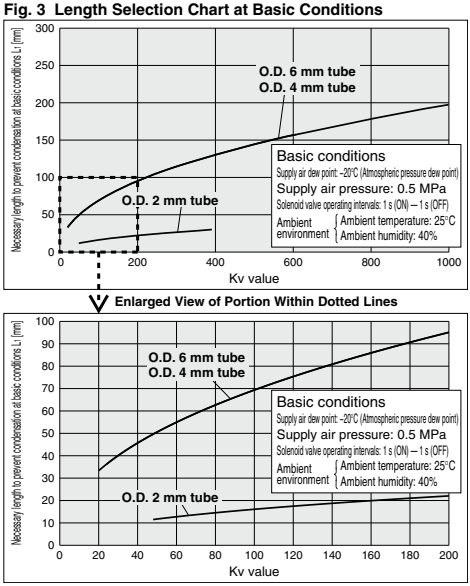
**Fig. 2 Piping Volume Chart**




### 2 Select the length of moisture control tube for the condensation area.

(1) Find $L_1$, the necessary length to prevent condensation at basic conditions corresponding to the Kv value, from the length selection chart at basic conditions.

**Fig. 3 Length Selection Chart at Basic Conditions**




(2) If your operating conditions are different from these basic conditions, apply a correction factor.

**Necessary length to prevent condensation L**
**= Necessary length to prevent condensation at basic conditions $L_1$ x C1 x C2 x C3**

**Correction Factor C1 for Supply Air Dew Point**

| Supply air dew point [°C] | Correction factor C1 |
|---|---|
| –10 | 2 |
| –20 | 1 |
| –30 | 0.5 |
| –40 | 0.25 |

**Correction Factor C2 for Ambient Environment**

| Relative humidity \ Temperature | Correction factor C2 | | | |
|---|---|---|---|---|
| | 10°C | 25°C | 40°C | 60°C |
| 20% | 0.2 | 0.4 | 0.6 | 0.8 |
| 40% | 0.5 | 1.0 | 1.3 | 1.8 |
| 60% | 1.0 | 1.7 | 2.8 | 3.7 |
| 75% | 2.1 | 4.0 | 5.9 | 7.8 |

**Correction Factor C3 for Supply Air Pressure**

| Supply pressure [MPa] | Correction factor C3 |
|---|---|
| 0.3 | 0.4 |
| 0.4 | 0.7 |
| 0.5 | 1 |
| 0.6 | 1.25 |
| 0.7 | 1.6 |

(3) Based on the calculated **L** value, select the **IDK0□-100** or **IDK0□-200**.
∗ If the L value is 200 or larger, a fitting should be connected to the IDK0□-100 and IDK0□-200 before use.

## Selection Example

**Circuit conditions**

- Actuator : CUJB4-6D
  Bore size **D**: 4 mm
  Stroke **s**: 6 mm
- Tube size : O.D. 6 mm x I.D. (Tube I.D. **d**) 4 mm
- Tube piping length **l** : 5 m
- Supply air pressure : 0.3 MPa
- Supply air dew point : –20°C (Atmospheric pressure dew point)
- Ambient environment : Ambient temperature 25°C, Ambient humidity 60%

### 1 Check the presence of condensation.

**Check the presence of condensation.**

(1) Calculation method of volume ratio (Kv value)

$$Vt = \frac{\pi d^2 l}{4} = \frac{\pi \times 4^2 \times 5000}{4} = 62800\ mm^3$$

$$Vc = \frac{\pi D^2 s}{4} = \frac{\pi \times 4^2 \times 6}{4} = 75\ mm^3$$

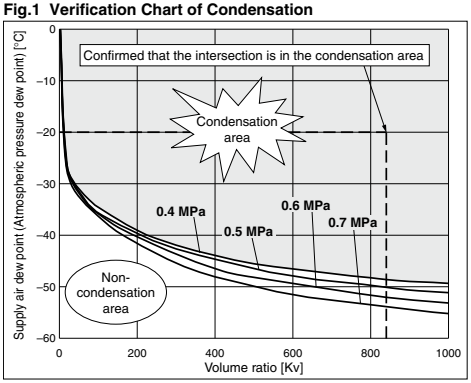
$$Kv = \frac{Vt}{Vc} = 837$$

Note) For dual piston cylinder, the volume ratio will be 1/2 of the volume ratio calculated above.

**Verify the presence of condensation.**

(2) Refer to the verification chart of condensation.
Check whether the volume ratio [Kv] and the supply air dew point intersect in the condensation area.
With the conditions above, they intersect in the condensation area, meaning **condensation will occur**.

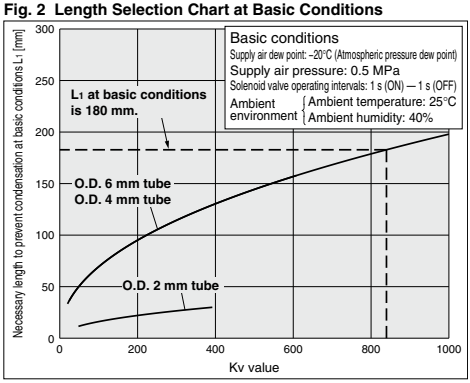
**Fig.1 Verification Chart of Condensation**




### 2 Select the length of moisture control tube.

(1) Find $L_1$, the necessary length to prevent condensation at basic conditions, from the length selection chart at basic conditions and Kv value.

**Fig. 2 Length Selection Chart at Basic Conditions**




(2) If your operating conditions are different from these basic conditions, apply a correction factor.
**Necessary length to prevent condensation L**
**= Necessary length to prevent condensation at basic conditions $L_1$ x C1 x C2 x C3**

In the example circuit, the conditions which are different from the basic conditions are:
Supply air dew point: –20°C (Atmospheric pressure dew point)
Supply air pressure: 0.3 MPa
Ambient environment: 25°C, 60%

∗ Basic conditions
Supply air dew point: –20°C (Atmospheric pressure dew point)
Supply air pressure: 0.5 MPa
Ambient environment: 25°C, 40%

(a) Find the correction factors.
- Supply air dew point correction factor **C1 = 1**
- Ambient environment correction factor **C2 = 1.7**
- Supply air pressure correction factor **C3 = 0.4**

(b) Find the necessary effective length after correction.

⇩

**Necessary length to prevent condensation L = 180 x 1 x 1.7 x 0.4 ≈ 120 mm**

(3) Therefore, the moisture control tube **IDK06-200** with effective length 20 cm should be used.

# *IDK Series*
# Specific Product Precautions 1

**Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.**

### Design

## ⚠Caution

1. Use the moisture control tube without lubrication.
2. Do not cover the moisture control tube or use in an enclosed space. Water vapor escapes outside of the moisture control tube.
   Covering the moisture control tube will reduce the performance and condensation cannot be prevented.
3. The exterior dimensions will change depending on the temperature and humidity.
   If the product is left in an environment which exceeds the specifications of 40°C and 75% RH relative humidity, the outer diameter will increase and it will become difficult to insert and remove it from the One-touch fitting.
   In such cases, please refrain from inserting and removing the product with force. Perform insertion and removal in a location with a lower temperature and lower humidity.
4. As the product is used to prevent condensation during use, the outer diameter of the tubing will increase and it may become difficult to remove it from the One-touch fitting. In such cases, wait for a short while after operation has been stopped before removing the tubing.
5. The color of the moisture control tube will turn to brown over time due to reaction with organic substances in the air. This does not affect the performance or strength.
6. Do not wipe or clean the product with alcohol. Only air blow should be performed.
7. The moisture control tube is assumed to be used for static piping.
   If the tube moves, for example in a flexible moving tube, it may become worn, elongated or torn due to tensile forces, or disconnected from the fitting. Ensure the tube is in a static condition at all times before using.

### Operating Environment

## ⚠Caution

1. The moisture control tube is for indoor use. It cannot be used under water or where it is exposed to water.
2. Do not use this product in locations where there are problems with static electricity.
3. Do not use this product in locations where spatter is generated.
4. Do not use in an environment where the product is directly exposed to cutting oil, lubricant, coolant oil, etc.

### Operating Environment

## ⚠Caution

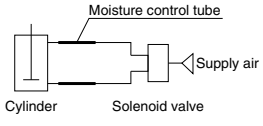
5. Do not use in environments where foreign matter may stick to the product or get mixed in the product's interior.
6. Avoid high temperature and humidity in the operating environment. They will reduce the performance of the tube and condensation may be generated.

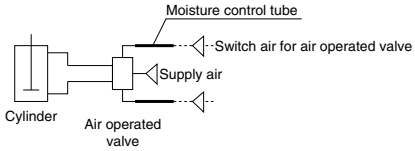
### Mounting/Piping

## ⚠Caution

1. Do not use the moisture control tubes bundled together. Otherwise, the performance may be decreased.
2. Connect the tube directly to the fitting of the actuator or air operated valve.
   If the tube is connected to other places, condensation will not be prevented and vapor will be generated.

**Mounting position**




3. Clean the tube and actuator by air blowing to eliminate moisture before connecting them to the circuit with condensation.
   When condensation is being generated in the tubing of an actuator, it is possible that all the required grease has been washed away. Make sure to mount the moisture control tube after adding grease to the actuator.
4. Mount the tube with minimum bending radius or more. Be careful not to bend or flatten the tube even if the bending radius is more than the minimum value. The moisture control tube is not suitable for the place where the product slides in high frequency.
   Do not stretch or shake this product when using.
5. When connecting this product to a fitting, hold the tube and slowly push the tube straight (0 to 5°) into the fitting until it stops. Pull the tube back gently to make sure that it is connected firmly. If the tube is not installed correctly, it may cause air leaks, or the tube may be disconnected.
   As a guide, connect the tube to the fitting until the inner sleeve is not visible from the fitting.

# *IDK Series*
# Specific Product Precautions 2

**Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.**

## Mounting/Piping

### ⚠Caution

**6. Install a refrigerated air dryer and a mist separator in the upstream compressed air line. The condensation prevention performance may be lowered depending on the quality of the supply compressed air (oil, dew point).**

**Recommended Model**

| Description | Model |
|---|---|
| Refrigerated air dryer | IDF/IDU |
| Mist separator | AM/AFM |

**7. Select the moisture control tube with the same diameter as the tube connected.**

**Example) TU0604 → IDK06-□00**


∗ One-touch fitting (KQ2H06-00A) is not included.

**8. Do not cut this product or use it without the inner sleeve. The inner sleeve cannot be removed. If the inner sleeve comes off, re-insert the inner sleeve into the tube again before mounting it to the fitting.**

**9. The only fittings this product can be used with are the KQ2 and KJ series One-touch fittings and their corresponding equipment (speed controllers, rotary One-touch fittings, etc.) Other fittings cannot be used.**

## Others

### ⚠Caution

**1. The moisture control tube is a product to prevent condensation of actuating parts such as small actuators and air operated valves. If you wish to use the product for any other application, please contact SMC.**

**2. Store the moisture control tube without unpacking. After unpacking the product, store it at a temperature of 40°C or less and relative humidity of 75% or less.**

**3. When the moisture control tube (coil shape) is stored or used for long periods, the dimensions and shape may change.**
**Note that the shape of this product tends to change easily, particularly in high temperature and humidity environments.**