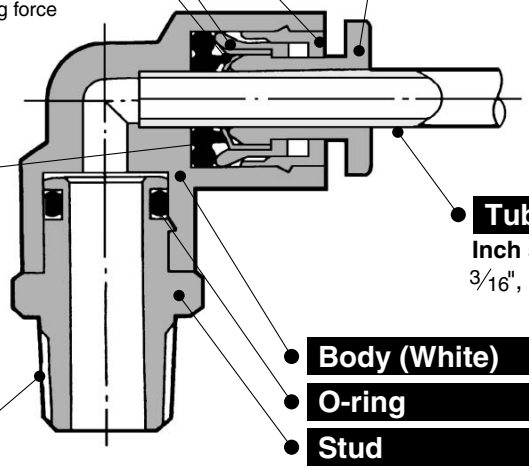
# Inch-size One-touch Fittings

# *Series KQ2*

## Applicable Tubing: Inch Size
## Connection Thread: M, R, Rc



**Guide**

**Collet**

**Chuck**

**Suitable for use with nylon, soft nylon and urethane.**

**Large retaining force.**

Has large retaining force while holding force is increased by the collet.

**Release button (Orange)**

**Light force for removal**

When the fitting is removed from the tube, the chuck and collet are released, thus preventing them from biting into the tube excessively.

**Seal**

**Can be used for a wide range of pressures from a low vacuum up to a pressure of 1.0 MPa**

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Tube**

**Inch size**

3/16", 1/4", 5/16", 3/8", 1/2"

**Connection thread**

**M, R, Rc**

**Body (White)**

**O-ring**

**Stud**

**Effective when piping in a confined space.**

The body and the threaded portion can rotate. (To the degree for positioning)

PAT.

### Applicable Tubing

| | |
|---|---|
| Tubing material | Nylon, Soft nylon, Polyurethane |
| Tubing O.D. (inch) | ø3/16, ø1/4, ø5/16, ø3/8, ø1/2 |

### Specifications

| | | |
|---|---|---|
| Fluid | | Air/Water Note) |
| Maximum operating pressure | | 1.0 MPa |
| Proof pressure | | 3.0 MPa |
| Ambient and fluid temperature | | –5 to 60°C (Water: 0 to 40°C) (No freezing) |
| Thread | Mounting section | JIS B 0203 (Taper thread for piping) |
| | Nut section | JIS B 0211, Class 2 (Metric fine thread) |
| Thread seal | | With seal |

Note) Applicable for general industrial water. Please consult with SMC if using for other kinds of fluid.
Also, the surge pressure must be under the maximum operating pressure.

### Principal Parts Material

| | |
|---|---|
| Body | C3604BD, PBT, PP |
| Stud | C3604BD (Thread portion) |
| Chuck | Stainless steel 304 |
| Guide | Stainless steel 304, C3604BD, POM |
| Collet | POM |
| Release button | POM |
| Seal, O-ring | NBR |
| Gasket | Stainless steel 304, NBR |

## Model

**Male connector**
**KQ2H** P. 26

Use to pipe in the same direction from female thread. Most general style.

**Straight union**
**KQ2H** P. 26

Use to connect tubes in the same direction.

**Male elbow**
**KQ2L** P. 26

Use to pipe at right angles to female thread. Most general style.

**Union elbow**
**KQ2L** P. 26

Use to connect tubes at the right angles.

**Plug-in elbow**
**KQ2L** P. 27

Use to change by 90° in a tube fetching direction from One-touch fitting.

**Reducer elbow**
**KQ2L** P. 27

Use to change by 90° in a tube fetching direction from One-touch fitting and to size down.

**Extended male elbow**
**KQ2W** P. 27

Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid from interfering with each other by making the piping two-level.

**Male branch tee**
**KQ2T** P. 27

Use to branch line from female thread in both 90° directions.

**Union tee**
**KQ2T** P. 28

Use to connect tubes in both 90° directions.

**Male run tee**
**KQ2Y** P. 28

Use to branch line in the same direction from female thread and 90° direction.

**Plug-in reducer**
**KQ2R** P. 28

Use to size down One-touch fittings.

**Union "Y"**
**KQ2U** P. 28

Use to branch line in the same direction.

**Plug-in "Y"**
**KQ2U** P. 29

Use to branch line in the same direction from One-touch fittings.

**Branch "Y"**
**KQ2U** P. 29

Use to branch line in the same direction from female thread.

**Bulkhead union**
**KQ2E** P. 29

Use to connect male thead and tube through a panel.

**Bulkhead connector**
**KQ2E** P. 29

Use to connect male thead and tube through a panel.

**Gasket/Seal for M5 thread**

**Part no. M-5G2**
**Material Stainless steel 304, NBR**



## How to Order

**KQ2 H 05 — 02 S**

**One-touch fittings**

**Model**

| | |
|---|---|
| H | Male connecter * |
| | Straight union |
| L | Male elbow * |
| | Union elbow |
| | Plug-in elbow |
| | Reducer elbow |
| W | Extended male elbow * |
| T | Male branch tee * |
| | Union tee |
| Y | Male run tee * |
| U | Union "Y" |
| | Plug-in "Y" |
| | Branch "Y" * |
| R | Plug-in reducer |
| E | Bulkhead union |
| | Bulkhead connector |

*mark: With seal is available.

**Applicable tubing O.D.**

| | |
|---|---|
| 01 | 1/8 |
| 05 | 3/16 |
| 07 | 1/4 |
| 09 | 5/16 |
| 11 | 3/8 |
| 13 | 1/2 |

**Port size**

| | |
|---|---|
| M5 | M5 x 0.8 |
| 01 | 1/8 |
| 02 | 1/4 |
| 03 | 3/8 |
| 04 | 1/2 |
| 00 | Same dia. tubing |
| 99 | Same dia. rod |

**With thread seal**

| | |
|---|---|
| Nil | Without seal |
| S | With thread seal |

## Male Connector: KQ2H

**KQ2H01-M5**
**KQ2H07-M5**

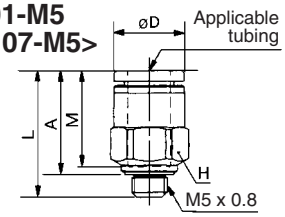
**<KQ2H05-M5>**

**<R>**

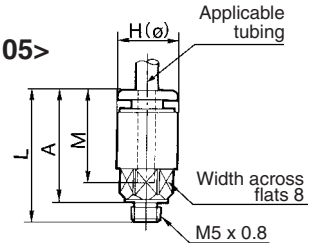
| Applicable tubing O.D. (inch) | Connection thread M R | Model | H (Width across flats) | Note) øD | L | A * | M | Min. port size | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|
| 1/8 | M5 x 0.8 | **KQ2H01-M5** | 7 | — | 16.7 | 13.6 | 12.7 | 2.5 | 2 |
| | 1/8 | **KQ2H01-01S** | 10 | — | 22 | 18 | 15.5 | | 9 |
| | 1/4 | **KQ2H01-02S** | 14 | — | 19.5 | 13.5 | | | 16 |
| 3/16 | M5 x 0.8 | **KQ2H05-M5** | 10.7 | — | 24 | 20.5 | 16.5 | 2.5 | 6 |
| | 1/8 | **KQ2H05-01S** | 11 | — | 22 | 18 | | 3.5 | 11 |
| | 1/4 | **KQ2H05-02S** | 14 | — | 21 | 15 | | | 12 |
| 1/4 | M5 x 0.8 | **KQ2H07-M5** | 11 | 10.3 | 18.4 | 15.3 | 13.6 | 2.5 | 3.3 |
| | 1/8 | **KQ2H07-01S** | 14 | — | 22.5 | 18.5 | 17 | 4.6 | 10 |
| | 1/4 | **KQ2H07-02S** | | — | 23 | 17 | | | 15 |
| | 3/8 | **KQ2H07-03S** | 17 | — | 23 | 16.5 | | | 27 |
| 5/16 | 1/8 | **KQ2H09-01S** | 14 | — | 28 | 24 | 18.5 | 6 | 15 |
| | 1/4 | **KQ2H09-02S** | | — | 26.5 | 20.5 | | | 16 |
| | 3/8 | **KQ2H09-03S** | 17 | — | 22.5 | 15.5 | | | 24 |
| 3/8 | 1/4 | **KQ2H11-02S** | 17 | — | 33.5 | 27.5 | 21 | 7 | 31 |
| | 3/8 | **KQ2H11-03S** | | — | 29 | 22.5 | | | 29 |
| | 1/2 | **KQ2H11-04S** | 22 | — | 27 | 19 | | | 46 |
| 1/2 | 1/4 | **KQ2H13-02S** | 22 | — | 34.5 | 28.5 | 22 | 9 | 44 |
| | 3/8 | **KQ2H13-03S** | | — | 33.5 | 27 | | 9.6 | |
| | 1/2 | **KQ2H13-04S** | | — | 30 | 22 | | | |

* Reference dimensions after R thread installation.
Note) øD: Max. diameter

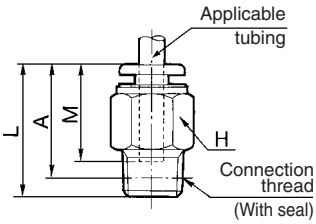
**KQ2H01-M5**
**<KQ2H07-M5>**




**<KQ2H05>**



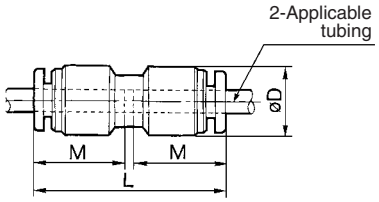

**<R>**




## Straight Union: KQ2H

| Applicable tubing O.D. (inch) | Model | Note) øD | L | M | Min. port size | Weight (g) |
|---|---|---|---|---|---|---|
| 3/16 | **KQ2H05-00** | 11.4 | 34 | 16.5 | 3.5 | 4 |
| 1/4 | **KQ2H07-00** | 13.2 | 34.5 | 17 | 4.6 | 4 |
| 5/16 | **KQ2H09-00** | 15.2 | 38.5 | 18.5 | 6 | 6 |
| 3/8 | **KQ2H11-00** | 17.9 | 42.5 | 21 | 7 | 11 |
| 1/2 | **KQ2H13-00** | 21.7 | 44.5 | 22 | 9.6 | 16 |

Note) øD: Max. diameter

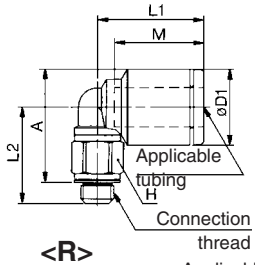



## Male Elbow: KQ2L

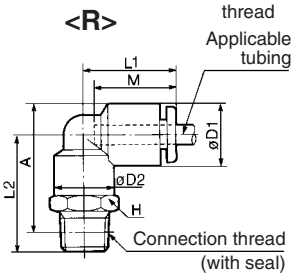
| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | A * | M | Min. port size | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/8 | M5 x 0.8 | **KQ2L01-M5** | 7 | 8.4 | — | 15.3 | 13.2 | 14.3 | 12.7 | 2.3 | 2.5 |
| 3/16 | 1/8 | **KQ2L05-01S** | 10 | 11.4 | 10 | 19.5 | 22.5 | 24 | 16.5 | 3.5 | 10 |
| | 1/4 | **KQ2L05-02S** | 14 | | | | 26.5 | 26 | | | 19 |
| 1/4 | M5 x 0.8 | **KQ2L07-M5** | 7 | 12 | — | 16.1 | 15.1 | 18 | 13.6 | 2.3 | 3.2 |
| | 1/8 | **KQ2L07-01S** | 10 | 13.2 | 10 | 20.5 | 23.5 | 26 | 17 | 4.6 | 10 |
| | 1/4 | **KQ2L07-02S** | 14 | | | | 27.5 | 28 | | | 20 |
| | 3/8 | **KQ2L07-03S** | 17 | | | | 29.5 | 29.5 | | | 32 |
| 5/16 | 1/8 | **KQ2L09-01S** | 12 | 15.2 | 12 | 23.5 | 24.5 | 28 | 18.5 | 6 | 12 |
| | 1/4 | **KQ2L09-02S** | 14 | | | | 28.5 | 30 | | | 20 |
| | 3/8 | **KQ2L09-03S** | 17 | | | | 30.5 | 31.5 | | | 28 |
| 3/8 | 1/4 | **KQ2L11-02S** | 17 | 17.9 | 17 | 25.5 | 29.5 | 32.5 | 21 | 7 | 23 |
| | 3/8 | **KQ2L11-03S** | | | | | 31.5 | 34 | | | 33 |
| | 1/2 | **KQ2L11-04S** | 22 | | | | 35.5 | 36.5 | | | 59 |
| 1/2 | 1/4 | **KQ2L13-02S** | 17 | 21.7 | 17 | 28 | 31.5 | 36.5 | 22 | 9 | 28 |
| | 3/8 | **KQ2L13-03S** | | | | | 33.5 | 38.5 | | 9.6 | 36 |
| | 1/2 | **KQ2L13-04S** | 22 | | | | 37.5 | 40 | | | 62 |

* Reference dimensions after R thread installation.
Note) øD1: Max. diameter

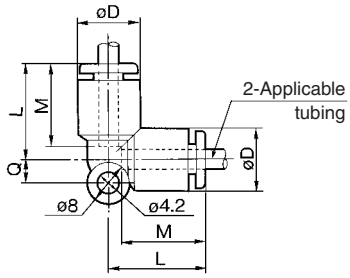
**<M5>**




**<R>**




## Union Elbow: KQ2L

| Applicable tubing O.D. (inch) | Model | Note) øD | L | Q | M | Min. port size | Weight (g) |
|---|---|---|---|---|---|---|---|
| 3/16 | **KQ2L05-00** | 11.4 | 19.5 | 4.8 | 16.5 | 3.5 | 5 |
| 1/4 | **KQ2L07-00** | 13.2 | 20.5 | 5.3 | 17 | 4.6 | 5 |
| 5/16 | **KQ2L09-00** | 15.2 | 23 | 6 | 18.5 | 6 | 7 |
| 3/8 | **KQ2L11-00** | 17.9 | 26 | 6.6 | 21 | 7 | 13 |
| 1/2 | **KQ2L13-00** | 21.7 | 29 | 7.8 | 22 | 9.6 | 18 |

Note) øD: Max. diameter