

# One-touch Fittings

## Series KQ2

Applicable Tubing: Metric Size  
Connection Thread: M, R, Rc

### How to Order

**KQ 2 H 06 - 01 S -**

• **One-touch fittings**

• **Product's color**

| Symbol | Body  | Release button |
|--------|-------|----------------|
| 2      | White | Light gray     |
| Nil    | Black | Blue           |

• **With thread sealant (Male thread only)**

|     |                     |
|-----|---------------------|
| Nil | None                |
| S   | With thread sealant |

Note) Port size with sealant: Only  
R 1/8  
R 1/4  
R 3/8  
R 1/2

• **Applicable tubing O.D.**

|    |      |
|----|------|
| 23 | ø3.2 |
| 04 | ø4   |
| 06 | ø6   |
| 08 | ø8   |
| 10 | ø10  |
| 12 | ø12  |
| 16 | ø16  |

• **Port size/Applicable tubing O.D.**

| Tubing (Rod) connection | Thread connection | Applicable tubing O.D.             |
|-------------------------|-------------------|------------------------------------|
| M5                      | M5                | M5 x 0.8                           |
| M6                      | M6                | M6 x 1.0                           |
| 01                      | R 1/8, Rc 1/8     |                                    |
| 02                      | R 1/4, Rc 1/4     |                                    |
| 03                      | R 3/8, Rc 3/8     |                                    |
| 04                      | R 1/2, Rc 1/2     |                                    |
| 00                      | Same dia. tubing  |                                    |
| 04                      | ø4                | (Reducer)<br>Different dia. tubing |
| 06                      | ø6                |                                    |
| 08                      | ø8                |                                    |
| 10                      | ø10               |                                    |
| 12                      | ø12               |                                    |
| 16                      | ø16               |                                    |
| 99                      | Same dia. rod     |                                    |

• **Made to Order**  
Refer to page 58 for details.

• **Model**

|               |  |           |                                 |
|---------------|--|-----------|---------------------------------|
| <b>H</b>      | Male connector                           | <b>T</b>  | Male branch tee                 |
|               | Straight union                           |           | Union tee                       |
|               | Different diameter straight              |           | Different diameter tee*         |
| <b>S</b>      | Hex. socket head male connector          | <b>TW</b> | Cross*                          |
| <b>F</b>      | Female connector                         | <b>TX</b> | Different diameter cross*       |
| <b>L</b>      | Male elbow                               | <b>TY</b> | Different diameter cross*       |
|               | Union elbow                              | <b>Y</b>  | Male run tee                    |
|               | Plug-in elbow                            | <b>D</b>  | Male delta union                |
| Reducer elbow | Delta union                              |           |                                 |
| <b>LU</b>     | Male branch connector                    | <b>U</b>  | Branch "Y"                      |
|               | Branch union elbow                       |           | Union "Y"                       |
| <b>K</b>      | 45° male elbow                           |           | Different dia. union "Y"        |
| <b>V</b>      | Universal male elbow                     |           | Plug-in "Y"                     |
| <b>VS</b>     | Hexagon socket head universal male elbow |           | Delta branch                    |
| <b>VF</b>     | Universal female elbow                   | <b>UD</b> | Different dia. double union "Y" |
| <b>LF</b>     | Female elbow                             | <b>XD</b> | Double plug-in "Y"              |
| <b>VD</b>     | Double universal male elbow              | <b>X</b>  | Different diameter plug-in "Y"  |
| <b>VT</b>     | Triple universal male elbow              | <b>R</b>  | Plug-in reducer                 |
| <b>Z</b>      | Branch universal male elbow              |           | Bulkhead union                  |
| <b>ZF</b>     | Branch universal female elbow            | <b>E</b>  | Bulkhead connector              |
| <b>ZD</b>     | Double branch universal male elbow       |           | Bulkhead male elbow             |
| <b>ZT</b>     | Triple branch universal male elbow       | <b>LE</b> |                                 |
|               | Extended plug-in elbow                   |           |                                 |
| <b>W</b>      | Extended male elbow                      |           |                                 |

\* Available only for white color body.

**Accessory**

| Symbol      | Name           |
|-------------|----------------|
| <b>KQ2N</b> | Nipple         |
|             | Reducer nipple |
| <b>KQ2C</b> | Adaptor        |
|             | Tube cap       |
| <b>KQ2C</b> | Color cap      |
| <b>KQ2P</b> | Plug (White)   |
| <b>KQP</b>  | Plug (Blue)    |

Use the below part number to order the gasket for M5 and M6 threads.

Gasket for M5 thread: M-5G2

Gasket for M6 thread: M-6G

Series KQ2: White body  
Series KQ : Black body

**Guide**

**Collet**

**Chuck**

Suitable for use with nylon and urethane. Large retaining force.

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

**Seal**

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

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

**Connection thread**

M, R, Rc

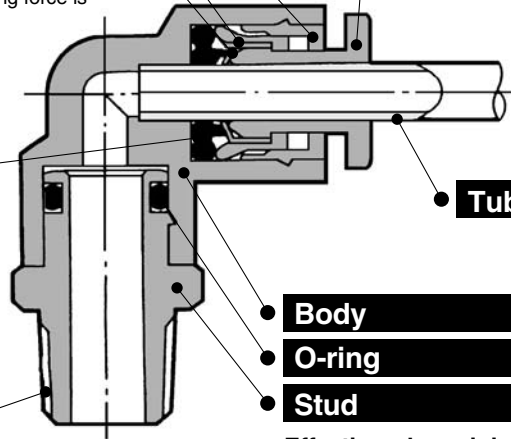
**Release button**

Series KQ2: Light gray

Series KQ : Blue

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.



**Tube**

**Body**

**O-ring**

**Stud**

Effective when piping in a confined space.

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

PAT.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

**One-touch IN/OUT connection.**  
Possible to use in vacuum  
to **-100 kPa**



### Applicable Tubing

|               |   |
|---------------|---|
| Tube material | FEP, PFA, Nylon, Soft nylon <sup>(1)</sup> , Polyurethane |
| Tube O.D.     | ø3.2, ø4, ø6, ø8, ø10, ø12, ø16                           |

Note 1) Soft nylon tubing is not compatible with water.

### Product's Color

| Series     | Body  | Release button |
|------------|-------|----------------|
| Series KQ2 | White | Light gray     |
| Series KQ  | Black | Blue           |

### Specifications

|  |                         |   |
|--|-------------------------|---|
| <b>Fluid</b>                                   |                         | Air/Water <sup>(2)</sup>  |
| <b>Operating pressure range <sup>(3)</sup></b> |                         | -100 kPa to 1 MPa   |
| <b>Proof pressure</b>                          |                         | 3 MPa   |
| <b>Ambient and fluid temperature</b>           |                         | -5 to 60°C, Water: 0 to 40°C (No freezing)                              |
| <b>Thread</b>                                  | <b>Mounting section</b> | JIS B0203 (Taper thread for piping)<br>JIS B0205 (Metric coarse thread) |
|  | <b>Nut section</b>      | JIS B0205 (Metric fine thread)  |
| <b>Seal on the threads</b>                     |                         | With sealant or none  |



Note 2) The surge pressure must be under the maximum operating pressure.

Note 3) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

|                        |                                 |
|------------------------|---------------------------------|
| Body                   | C3604, PBT, PP                  |
| Stud                   | C3604 (Thread portion)          |
| Chuck                  | Stainless steel 304             |
| Guide                  | Stainless steel 304, C3604, PBT |
| Collet, Release button | POM                             |
| Seal, O-ring           | NBR                             |
| Gasket                 | Stainless steel 304, NBR        |



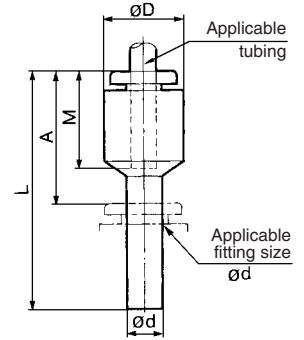
**Made to Order**  
(Refer to page 58 for details.)

# Series KQ2

## Plug-in Reducer: KQ2R



| Applicable tubing O.D. (mm) | Applicable fitting size $\phi d$ | Model     | <sup>(1)</sup><br>$\phi D$ | L    | A    | M    | Effective area <sup>(2)</sup> (mm <sup>2</sup> ) |          | Mass (g) |      |     |
|-----------------------------|----------------------------------|-----------|----------------------------|------|------|------|--|----------|----------|------|-----|
|                             |                                  |           |                            |      |      |      | Nylon  | Urethane |          |      |     |
| 3.2                         | 4                                | KQ2R23-04 | 9.6                        | 33.5 | 18.5 | 15.5 | 3.4  | 2.9      | 2        |      |     |
|                             | 6                                | KQ2R04-06 | 10.4                       | 34.5 | 17.5 | 16   | 5.6  | 4        | 1.8      |      |     |
| 8                           | KQ2R04-08                        | 36.5      |                            | 18   | 2.0  |      |  |          |          |      |     |
| 4                           | 10                               | KQ2R04-10 | 12.8                       | 39.5 | 18.5 | 17   | 4  | 4        | 3.3      |      |     |
|                             | 4                                | KQ2R06-04 | 12.8                       | 37   | 21   |      |  |          | 2.5      |      |     |
|                             | 8                                | KQ2R06-08 | 12.8                       | 37   | 18.5 |      |  |          | 13.1     | 10.4 | 3   |
| 10                          | KQ2R06-10                        | 39.5      |                            | 18.5 | 4.7  |      |  |          |          |      |     |
| 6                           | 12                               | KQ2R06-12 | 15.2                       | 42   | 20   | 18.5 | 26.1   | 18.0     | 4.0      |      |     |
|                             | 8                                | KQ2R08-10 | 15.2                       | 41   | 20   |      |  |          | 41.5     | 32.8 | 4.6 |
|                             | 12                               | KQ2R08-12 |                            | 42   |      |      |  |          |          |      | 20  |
| 8                           | 10                               | KQ2R10-12 | 18.5                       | 44.5 | 23   | 21   | 58.3   | (46.1)   | 33       |      |     |
|                             | 12                               | KQ2R10-16 | 20.9                       | 50.5 | 25.5 |      |  |          | 42       |      |     |
| 10                          | 16                               | KQ2R12-16 | 20.9                       | 50.5 | 25.5 | 22   | 58.3   | (46.1)   | 37       |      |     |

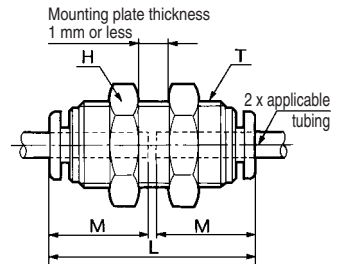


Note 1)  $\phi D$ : Max. diameter  
Note 2) ( ): Values for soft nylon.

## Bulkhead Union: KQ2E



| Applicable tubing O.D. (mm) | Model     | T (M)     | H (width across flats) | L    | Mounting hole | M    | Effective area <sup>Note)</sup> (mm <sup>2</sup> ) |          | Mass (g) |
|-----------------------------|-----------|-----------|------------------------|------|---------------|------|--|----------|----------|
|                             |           |           |                        |      |               |      | Nylon  | Urethane |          |
| 3.2                         | KQ2E23-00 | M12 x 1   | 14                     | 31.5 | 13            | 15.5 | 3.4  | 2.9      | 26       |
| 4                           | KQ2E04-00 | M12 x 1   | 14                     | 32.5 | 13            | 16   | 5.6  | 4        | 26       |
| 6                           | KQ2E06-00 | M14 x 1   | 17                     | 34.5 | 15            | 17   | 13.1   | 10.4     | 33       |
| 8                           | KQ2E08-00 | M16 x 1   | 19                     | 38   | 17            | 18.5 | 26.1   | 18.0     | 52       |
| 10                          | KQ2E10-00 | M20 x 1   | 24                     | 42.5 | 21            | 21   | 41.5   | 29.5     | 70       |
| 12                          | KQ2E12-00 | M22 x 1   | 27                     | 44   | 23            | 22   | 58.3   | 46.1     | 90       |
| 16                          | KQ2E16-00 | M28 x 1.5 | 32                     | 51   | 29            | 25   | 113  | (96)     | 115      |

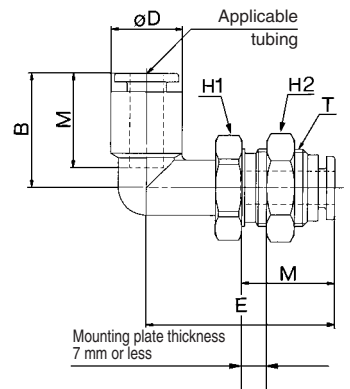


Note) ( ): Values for soft nylon.

## Bulkhead Male Elbow: KQ2LE



| Applicable tubing O.D. (mm) | Model      | T (M)   | H1 (width across flats) | H2 (width across flats) | B    | E    | <sup>Note)</sup><br>$\phi D$ | Mounting hole | M    | Effective area <sup>Note)</sup> (mm <sup>2</sup> ) |          | Mass (g) |
|-----------------------------|------------|---------|-------------------------|-------------------------|------|------|------------------------------|---------------|------|--|----------|----------|
|                             |            |         |                         |                         |      |      |                              |               |      | Nylon  | Urethane |          |
| 4                           | KQ2LE04-00 | M12 x 1 | 14                      | 14                      | 18.5 | 31   | 10.4                         | 13            | 16   | 4.2  | 4.2      | 18       |
| 6                           | KQ2LE06-00 | M14 x 1 | 17                      | 17                      | 20.5 | 34   | 12.8                         | 15            | 17   | 11.4   | 9.0      | 25       |
| 8                           | KQ2LE08-00 | M16 x 1 | 17                      | 19                      | 23.5 | 38.5 | 15.2                         | 17            | 18.5 | 21.6   | 14.9     | 33       |
| 10                          | KQ2LE10-00 | M20 x 1 | 22                      | 24                      | 26.5 | 43.5 | 18.5                         | 21            | 21   | 35.2   | 25.0     | 63       |
| 12                          | KQ2LE12-00 | M22 x 1 | 24                      | 27                      | 28.5 | 45.5 | 20.9                         | 23            | 22   | 50.2   | 39.7     | 77       |

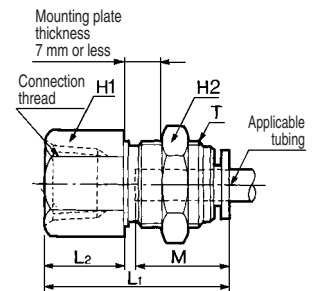


Note)  $\phi D$ : Max. diameter

## Bulkhead Connector: KQ2E



| Applicable tubing O.D. (mm) | Connection thread Rc | Model     | T (M)     | H1 (width across flats) | H2 (width across flats) | L1   | L2   | Mounting hole | M    | Effective area <sup>Note)</sup> (mm <sup>2</sup> ) |          | Mass (g) |
|-----------------------------|----------------------|-----------|-----------|-------------------------|-------------------------|------|------|---------------|------|--|----------|----------|
|                             |                      |           |           |                         |                         |      |      |               |      | Nylon  | Urethane |          |
| 3.2                         | 1/4                  | KQ2E23-02 | M12 x 1   | 17                      | 14                      | 31.5 | 15   | 13            | 15.5 | 3.4  | 2.9      | 13       |
|                             | 1/8                  | KQ2E04-01 | M12 x 1   | 14                      | 14                      | 27.5 | 11   | 13            | 16   | 5.6  | 4        | 16       |
| 1/4                         | KQ2E04-02            | 31        |           | 15                      |                         | 35   |      |               |      |  |          |          |
| 4                           | 1/8                  | KQ2E06-01 | M14 x 1   | 17                      | 17                      | 28   | 11   | 15            | 17   | 13.1   | 10.4     | 30       |
|                             | 1/4                  | KQ2E06-02 |           |                         |                         | 31.5 | 15   |               |      |  |          | 34       |
|                             | 3/8                  | KQ2E06-03 |           |                         |                         | 33.5 | 17   |               |      |  |          | 34       |
| 6                           | 1/8                  | KQ2E08-01 | M16 x 1   | 17                      | 19                      | 27.5 | 7.5  | 17            | 18.5 | 26.1   | 18.0     | 28       |
|                             | 1/4                  | KQ2E08-02 |           |                         |                         | 33   | 13   |               |      |  |          | 33       |
|                             | 3/8                  | KQ2E08-03 |           |                         |                         | 35   | 15   |               |      |  |          | 34       |
| 8                           | 1/4                  | KQ2E10-02 | M20 x 1   | 22                      | 24                      | 34.5 | 12.5 | 21            | 21   | 41.5   | 29.5     | 53       |
|                             | 3/8                  | KQ2E10-03 |           |                         |                         | 36.5 | 14   |               |      |  |          | 67       |
| 10                          | 3/8                  | KQ2E12-03 | M22 x 1   | 24                      | 27                      | 37   | 14   | 23            | 22   | 58.3   | 46.1     | 92       |
|                             | 1/2                  | KQ2E12-04 |           |                         |                         | 41   | 18   |               |      |  |          | 59       |
| 12                          | 3/8                  | KQ2E16-03 | M28 x 1.5 | 30                      | 32                      | 40   | 14   | 29            | 25   | 96   | (96)     | 127      |
|                             | 1/2                  | KQ2E16-04 |           |                         |                         | 44   | 18   |               |      |  |          | 113      |



Note) ( ): Values for soft nylon.