

# Metal One-touch Fittings

Applicable Tube: Metric Size, Connection Thread: G

## Series *KQB2*

RoHS



### Applicable Tube

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

### Specifications

|                                                  |                                              |
|--------------------------------------------------|----------------------------------------------|
| Fluid                                            | Air, Water                                   |
| Operating pressure range <sup>Note 2)</sup>      | –100 kPa to 1 MPa <sup>Note 3)</sup>         |
| Proof pressure                                   | 3.0 MPa                                      |
| Ambient and fluid temperature <sup>Note 4)</sup> | –5 to 150°C (No freezing) <sup>Note 3)</sup> |
| Lubricant                                        | Grease-free specification                    |
| Seal on the threads                              | With sealant                                 |

Note 1) For soft nylon tube, water cannot be used.

Note 2) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 3) Check the operating pressure range and operating temperature range of the tube.

Note 4) It is recommended that you use the inner sleeve in the following conditions:

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

#### \* Temperature Condition of Mounting the Inner Sleeve

| Tube               | Temperature   |
|--------------------|---------------|
| FEP tube/TH series | 80°C or more  |
| PFA tube/TL series | 120°C or more |

### Spare Parts

| Description  | Tube O.D. | Part no.          | Material                          |
|--------------|-----------|-------------------|-----------------------------------|
| Bulkhead nut | ø4        | <b>KQB223-P01</b> | C3604 (Electroless nickel plated) |
|              | ø6        | <b>KQB206-P01</b> |                                   |
|              | ø8        | <b>KQB208-P01</b> |                                   |
|              | ø10       | <b>KQB210-P01</b> |                                   |
|              | ø12       | <b>KQB212-P01</b> |                                   |
|              | ø16       | <b>KQB216-P01</b> |                                   |

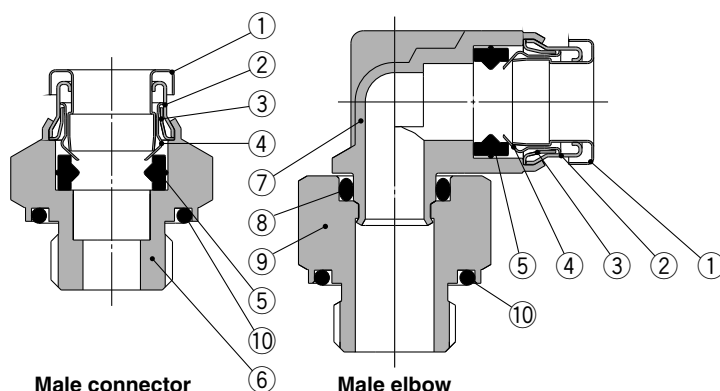
| Description     | Thread size | Part no.        | Material                    |
|-----------------|-------------|-----------------|-----------------------------|
| G thread O-ring | G1/8        | <b>KQB2-G01</b> | Special FKM (Fluoro coated) |
|                 | G1/4        | <b>KQB2-G02</b> |                             |
|                 | G3/8        | <b>KQB2-G03</b> |                             |
|                 | G1/2        | <b>KQB2-G04</b> |                             |

### Cross Reference Table of the Inner Sleeve

| Tube O.D. | Tube material              |                |                 | Applicable inner sleeve |        |
|-----------|----------------------------|----------------|-----------------|-------------------------|--------|
|           | TUS<br>(Soft polyurethane) | TH/TH<br>(FEP) | TL/TIL<br>(PFA) | Part no.                | Length |
| ø4        | —                          | TH0402         | —               | <b>TJ-0402</b>          | 18     |
|           | TUS0425                    | TH0425         | —               | <b>TJ-0425</b>          | 18     |
|           | —                          | —              | TL0403          | <b>TJ-0403</b>          | 18     |
| ø6        | TUS0604                    | TH0604         | TL0604          | <b>TJ-0604</b>          | 19     |
|           | TUS0805                    | —              | —               | <b>TJ-0805</b>          | 20.5   |
| ø8        | —                          | TH0806         | TL0806          | <b>TJ-0806</b>          | 20.5   |
|           | TUS1065                    | —              | —               | <b>TJ-1065</b>          | 23     |
| ø10       | —                          | TH1075         | —               | <b>TJ-1075</b>          | 23     |
|           | —                          | TH1008         | TL1008          | <b>TJ-1008</b>          | 23     |
|           | TUS1208                    | —              | —               | <b>TJ-1208</b>          | 24     |
| ø12       | —                          | TH1209         | —               | <b>TJ-1209</b>          | 24     |
|           | —                          | TH1210         | TL1210          | <b>TJ-1210</b>          | 24     |

\* C2700 + Electroless nickel plated is used for the TJ series.

### Construction



### Component Parts

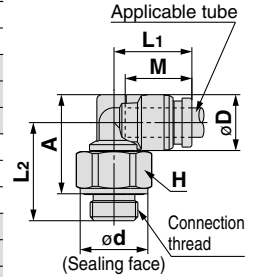
| No. | Description                | Material                          |
|-----|----------------------------|-----------------------------------|
| 1   | <b>Release button</b>      | Stainless steel 304               |
| 2   | <b>Guide 1</b>             | Stainless steel 304               |
| 3   | <b>Guide 2</b>             | Stainless steel 304               |
| 4   | <b>Chuck</b>               | Stainless steel 304               |
| 5   | <b>Seal</b>                | Special FKM (Fluoro coated)       |
| 6   | <b>Male connector body</b> | C3604 (Electroless nickel plated) |
| 7   | <b>Male elbow body</b>     | Stainless steel 316               |
| 8   | <b>O-ring</b>              | Special FKM (Fluoro coated)       |
| 9   | <b>Stud</b>                | C3604 (Electroless nickel plated) |
| 10  | <b>G thread O-ring</b>     | Special FKM (Fluoro coated)       |

## Dimensions

### Male Elbow: KQB2L



| Applicable tube O.D. (mm) | Connection thread G | Model       | H (Width across flat) | Note 1) $\phi D$ | $\phi d$ | L <sub>1</sub> | L <sub>2</sub> | A    | M    | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|---------------------------|---------------------|-------------|-----------------------|------------------|----------|----------------|----------------|------|------|-------------------------------------------|------------|
| $\phi 4$                  | 1/8                 | KQB2L04-G01 | 14                    | 9.1              | 13.8     | 14.4           | 18.9           | 17.9 | 12.6 | 4.2                                       | 15.6       |
|                           | 1/4                 | KQB2L04-G02 | 19                    |                  | 17.8     |                | 22.3           | 20.3 |      |                                           | 33         |
| $\phi 6$                  | 1/8                 | KQB2L06-G01 | 14                    | 11.4             | 13.8     | 15.9           | 20             | 20.2 | 13.6 | 11.4                                      | 17.2       |
|                           | 1/4                 | KQB2L06-G02 | 19                    |                  | 17.8     |                | 23.4           | 22.6 |      |                                           | 34.6       |
|                           | 3/8                 | KQB2L06-G03 | 22                    |                  | 21.8     |                | 25.9           | 24.1 |      |                                           | 54.5       |
| $\phi 8$                  | 1/8                 | KQB2L08-G01 | 14                    | 13.7             | 13.8     | 18.6           | 21.3           | 22.6 | 16.1 | 21.6                                      | 20.2       |
|                           | 1/4                 | KQB2L08-G02 | 19                    |                  | 17.8     | 19.1           | 24.7           | 25   |      |                                           | 36         |
|                           | 3/8                 | KQB2L08-G03 | 22                    |                  | 21.8     |                | 27.2           | 26.5 |      |                                           | 55.6       |
| $\phi 10$                 | 1/8                 | KQB2L10-G01 | 14                    | 16.6             | 13.8     | 20             | 22.7           | 25.5 | 17   | 21.6                                      | 25.7       |
|                           | 1/4                 | KQB2L10-G02 | 19                    |                  | 17.8     |                | 26.1           | 27.9 |      |                                           | 38.2       |
|                           | 3/8                 | KQB2L10-G03 | 22                    |                  | 21.8     | 21             | 28.6           | 29.4 |      | 35.2                                      | 56.2       |
|                           | 1/2                 | KQB2L10-G04 | 27                    |                  | 26.5     |                | 32.6           | 31.9 |      |                                           | 97.9       |
| $\phi 12$                 | 1/4                 | KQB2L12-G02 | 19                    | 18.7             | 17.8     | 22.6           | 27.2           | 30   | 18.6 | 50.2                                      | 41.9       |
|                           | 3/8                 | KQB2L12-G03 | 22                    |                  | 21.8     | 23.6           | 29.6           | 31.4 |      |                                           | 54.3       |
|                           | 1/2                 | KQB2L12-G04 | 27                    |                  | 26.5     |                | 33.6           | 33.9 |      |                                           | 94.6       |
| $\phi 16$                 | 3/8                 | KQB2L16-G03 | 22                    | 24.6             | 21.8     | 26.3           | 32.4           | 36.5 | 20.8 | 71                                        | 64.7       |
|                           | 1/2                 | KQB2L16-G04 | 27                    |                  | 26.5     | 27.3           | 36.4           | 39   |      | 100                                       | 95.7       |



Note 1)  $\phi D$  is maximum diameter.

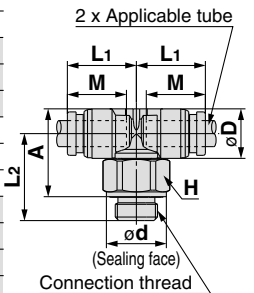
Note 2) Value of FEP tube.

Value of nylon tube for  $\phi 16$  only.

### Male Branch Tee: KQB2T



| Applicable tube O.D. (mm) | Connection thread G | Model       | H (Width across flat) | Note 1) $\phi D$ | $\phi d$ | L <sub>1</sub> | L <sub>2</sub> | A    | M    | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|---------------------------|---------------------|-------------|-----------------------|------------------|----------|----------------|----------------|------|------|-------------------------------------------|------------|
| $\phi 4$                  | 1/8                 | KQB2T04-G01 | 14                    | 9.1              | 13.8     | 14.4           | 18.9           | 17.9 | 12.6 | 6                                         | 17.5       |
|                           | 1/4                 | KQB2T04-G02 | 19                    |                  | 17.8     |                | 22.3           | 20.3 |      |                                           | 34.9       |
| $\phi 6$                  | 1/8                 | KQB2T06-G01 | 14                    | 11.4             | 13.8     | 15.9           | 20             | 20.2 | 13.6 | 13.9                                      | 21         |
|                           | 1/4                 | KQB2T06-G02 | 19                    |                  | 17.8     |                | 23.4           | 22.6 |      |                                           | 38         |
|                           | 3/8                 | KQB2T06-G03 | 22                    |                  | 21.8     |                | 25.9           | 24.1 |      |                                           | 57.9       |
| $\phi 8$                  | 1/8                 | KQB2T08-G01 | 14                    | 13.7             | 13.8     | 18.6           | 21.3           | 22.6 | 16.1 | 26.3                                      | 25.6       |
|                           | 1/4                 | KQB2T08-G02 | 19                    |                  | 17.8     | 19.1           | 24.7           | 25   |      |                                           | 41.2       |
|                           | 3/8                 | KQB2T08-G03 | 22                    |                  | 21.8     |                | 27.2           | 26.5 |      |                                           | 60.8       |
| $\phi 10$                 | 1/8                 | KQB2T10-G01 | 14                    | 16.6             | 13.8     | 20             | 22.7           | 25.5 | 17   | 40.8                                      | 34         |
|                           | 1/4                 | KQB2T10-G02 | 19                    |                  | 17.8     |                | 26.1           | 27.9 |      |                                           | 46         |
|                           | 3/8                 | KQB2T10-G03 | 22                    |                  | 21.8     | 21             | 28.6           | 29.4 |      |                                           | 64         |
|                           | 1/2                 | KQB2T10-G04 | 27                    |                  | 26.5     |                | 32.6           | 31.9 |      |                                           | 105.8      |
| $\phi 12$                 | 1/4                 | KQB2T12-G02 | 19                    | 18.7             | 17.8     | 22.6           | 27.2           | 30   | 18.6 | 57.2                                      | 53         |
|                           | 3/8                 | KQB2T12-G03 | 22                    |                  | 21.8     | 23.6           | 29.6           | 31.4 |      |                                           | 54.3       |
|                           | 1/2                 | KQB2T12-G04 | 27                    |                  | 26.5     |                | 33.6           | 33.9 |      |                                           | 105        |
| $\phi 16$                 | 3/8                 | KQB2T16-G03 | 22                    | 24.6             | 21.8     | 26.3           | 32.4           | 36.5 | 20.8 | 71                                        | 82.2       |
|                           | 1/2                 | KQB2T16-G04 | 27                    |                  | 26.5     | 27.3           | 36.4           | 39   |      | 100                                       | 112.1      |



Note 1)  $\phi D$  is maximum diameter.

Note 2) Value of FEP tube.

Value of nylon tube for  $\phi 16$  only.