

# Stainless Steel 316 One-touch Fittings

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

## KQG2 Series

RoHS



### Applicable Tubing

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

### Specifications

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

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

Note 2) Consult with SMC regarding applicable tube separately.

Note 3) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 4) Check the operating pressure range and operating temperature range of the tubing.

Note 5) It is recommended that you use the inner sleeve in the following conditions (Except ø3.2):

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

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

| Tubing                     | Temperature   |
|----------------------------|---------------|
| FEP tubing/TH Series       | 80°C or more  |
| Super PFA tubing/TL Series | 120°C or more |

### Spare Parts

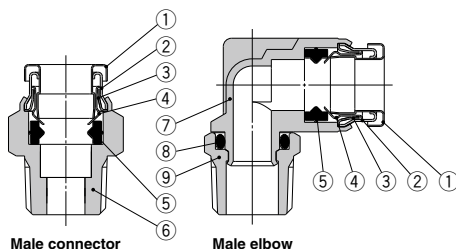
| Description  | Tubing O.D. | Part no.   | Material                         |
|--------------|-------------|------------|----------------------------------|
| Gasket       | —           | M-5G3      | Stainless steel 316, Special FKM |
| Bulkhead nut | ø3.2, ø4    | KQG223-P01 | Stainless steel 316              |
|              | ø6          | KQG206-P01 |                                  |
|              | ø8          | KQG208-P01 |                                  |
|              | ø10         | KQG210-P01 |                                  |
|              | ø12         | KQG212-P01 |                                  |
|              | ø16         | KQG216-P01 |                                  |

### Cross Reference Table of the Inner Sleeve

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

\* Stainless steel 316 is used for the TJG series.

### Construction



### Component Parts

| No. | Description         | Material                    |
|-----|---------------------|-----------------------------|
| 1   | Release button      | Stainless steel 316         |
| 2   | Guide 1             | Stainless steel 316         |
| 3   | Guide 2             | Stainless steel 316         |
| 4   | Chuck               | Stainless steel 316         |
| 5   | Seal                | Special FKM (Fluoro coated) |
| 6   | Male connector body | Stainless steel 316         |
| 7   | Male elbow body     | Stainless steel 316         |
| 8   | O-ring              | Special FKM (Fluoro coated) |
| 9   | Stud                | Stainless steel 316         |

# Stainless Steel 316 One-touch Fittings **KQG2 Series**

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

## Dimensions

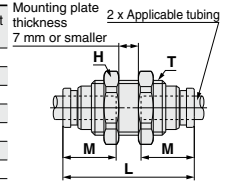
### Bulkhead Union: KQG2E



| Applicable tubing O.D. (mm) | Model      | T (M)   | H (Width across flat) | L    | Mounting hole | M    | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|-----------------------------|------------|---------|-----------------------|------|---------------|------|-------------------------------------------|------------|
| ø3.2                        | KQG2E23-00 | M10 x 1 | 12                    | 32.2 | 11            | 12   | 3.4                                       | 14         |
| ø4                          | KQG2E04-00 | M10 x 1 | 12                    | 32.4 | 11            | 12.6 | 5.6                                       | 14         |
| ø6                          | KQG2E06-00 | M14 x 1 | 17                    | 33.6 | 15            | 13.6 | 13.1                                      | 25.8       |
| ø8                          | KQG2E08-00 | M15 x 1 | 19                    | 36.4 | 16            | 16.1 | 26.1                                      | 30.4       |
| ø10                         | KQG2E10-00 | M18 x 1 | 21                    | 37.2 | 19            | 17   | 41.5                                      | 40.3       |
| ø12                         | KQG2E12-00 | M20 x 1 | 24                    | 39.2 | 21            | 18.6 | 58.3                                      | 49.9       |
| ø16                         | KQG2E16-00 | M27 x 1 | 30                    | 42.6 | 28            | 20.8 | 113                                       | 87.3       |

Note) Value of FEP tubing.

Value of nylon tubing for ø16 only.



### Union Tee: KQG2T

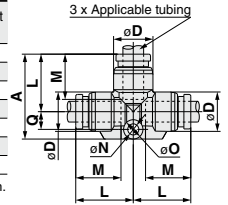


| Applicable tubing O.D. (mm) | Model      | Note 1) øD | L    | A    | Q    | M    | øN  | øO  | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|-----------------------------|------------|------------|------|------|------|------|-----|-----|-------------------------------------------|------------|
| ø3.2                        | KQG2T23-00 | 8.3        | 13.6 | 20.5 | 4.1  | 12   | 3.2 | 5.6 | 3.4                                       | 7.9        |
| ø4                          | KQG2T04-00 | 9.1        | 14.6 | 21.8 | 4.4  | 12.6 | 3.2 | 5.6 | 6.4                                       | 9.5        |
| ø6                          | KQG2T06-00 | 11.4       | 16.6 | 24.6 | 5.2  | 13.6 | 3.2 | 5.6 | 13.4                                      | 14.2       |
| ø8                          | KQG2T08-00 | 13.7       | 20.1 | 31.1 | 7    | 16.1 | 4.2 | 8   | 25.6                                      | 24.4       |
| ø10                         | KQG2T10-00 | 16.6       | 22   | 34   | 8    | 17   | 4.2 | 8   | 40                                        | 36.8       |
| ø12                         | KQG2T12-00 | 18.7       | 24.6 | 37.7 | 9.1  | 18.6 | 4.2 | 8   | 57.4                                      | 46.9       |
| ø16                         | KQG2T16-00 | 24.6       | 28.8 | 43.4 | 10.6 | 20.8 | 4.2 | 8   | 100                                       | 75.5       |

Note 1) For the ø16, this dimension refers to the O.D. of the release button.

Note 2) Value of FEP tubing.

Value of nylon tubing for ø16 only.



### Union "Y": KQG2U

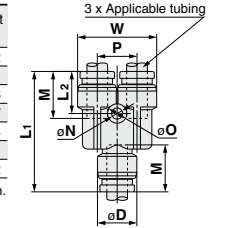


| Applicable tubing O.D. (mm) | Model      | Note 1) øD | W    | L1   | L2   | P    | M    | øN  | øO  | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|-----------------------------|------------|------------|------|------|------|------|------|-----|-----|-------------------------------------------|------------|
| ø3.2                        | KQG2U23-00 | 8.3        | 16.4 | 29   | 11   | 8.1  | 12   | 3.2 | 5.6 | 3.4                                       | 9.2        |
| ø4                          | KQG2U04-00 | 9.1        | 18.2 | 30.4 | 11.3 | 9.1  | 12.6 | 3.2 | 5.6 | 4.2                                       | 11.1       |
| ø6                          | KQG2U06-00 | 11.4       | 22.9 | 34.9 | 12.2 | 11.5 | 13.6 | 3.2 | 5.6 | 13.4                                      | 18.8       |
| ø8                          | KQG2U08-00 | 13.7       | 28.3 | 40.1 | 14.1 | 14.6 | 16.1 | 4.2 | 8   | 25.6                                      | 29.7       |
| ø10                         | KQG2U10-00 | 16.6       | 34.2 | 44   | 14.4 | 17.6 | 17   | 4.2 | 8   | 40                                        | 47.4       |
| ø12                         | KQG2U12-00 | 18.7       | 38.5 | 48.4 | 15.8 | 19.8 | 18.6 | 4.2 | 8   | 57.4                                      | 62.1       |
| ø16                         | KQG2U16-00 | 24.6       | 49.3 | 56.6 | 17.3 | 26   | 20.8 | 4.2 | 8   | 113                                       | 110.2      |

Note 1) For the ø16, this dimension refers to the O.D. of the release button.

Note 2) Value of FEP tubing.

Value of nylon tubing for ø16 only.



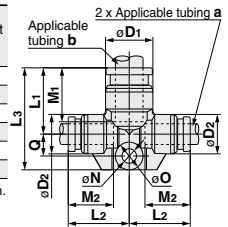
### Different Diameter Tee: KQG2T



| Applicable tubing O.D. (mm) | Model      | Note 1) øD1 | Note 1) øD2 | L1   | L2   | L3   | Q   | M1   | M2   | øN  | øO  | Note 2) Effective area (mm <sup>2</sup> ) | Weight (g) |
|-----------------------------|------------|-------------|-------------|------|------|------|-----|------|------|-----|-----|-------------------------------------------|------------|
| ø3.2 ø4                     | KQG2T23-04 | 9.1         | 8.3         | 14.2 | 14.1 | 21.1 | 4.1 | 12.6 | 12   | 3.2 | 5.6 | 3.8                                       | 8.5        |
| ø4 ø6                       | KQG2T04-06 | 11.4        | 9.1         | 15.6 | 15.7 | 22.8 | 4.4 | 13.6 | 12.6 | 3.2 | 5.6 | 7.1                                       | 11.5       |
| ø6 ø8                       | KQG2T06-08 | 13.7        | 11.4        | 19.1 | 17.7 | 29.5 | 6.4 | 16.1 | 13.6 | 4.2 | 8   | 16.4                                      | 20         |
| ø8 ø10                      | KQG2T08-10 | 16.6        | 13.7        | 21   | 21.2 | 32.1 | 7.1 | 17   | 16.1 | 4.2 | 8   | 36                                        | 29.8       |
| ø10 ø12                     | KQG2T10-12 | 18.7        | 16.6        | 23.6 | 23.1 | 35.7 | 8.1 | 18.6 | 17   | 4.2 | 8   | 56                                        | 41.3       |
| ø12 ø16                     | KQG2T12-16 | 24.6        | 18.7        | 26.8 | 26.7 | 39.9 | 9.1 | 20.8 | 18.6 | 4.2 | 8   | 108.5                                     | 58         |

Note 1) For the ø16, this dimension refers to the O.D. of the release button.

Note 2) Value of FEP tubing.



### Plug-in Reducer: KQG2R



| Applicable tubing O.D. (mm) | Applicable fitting size ød | Model      | øD | L    | A    | M    | Note) Effective area (mm <sup>2</sup> ) | Weight (g) |
|-----------------------------|----------------------------|------------|----|------|------|------|-----------------------------------------|------------|
| ø3.2                        | ø4                         | KQG2R23-04 | 9  | 32.9 | 20.3 | 12   | 3.4                                     | 4.7        |
| ø4                          | ø6                         | KQG2R04-06 | 9  | 34.4 | 20.8 | 12.6 | 5.6                                     | 6.7        |
| ø6                          | ø8                         | KQG2R06-08 | 12 | 38.4 | 22.3 | 13.6 | 13.1                                    | 12.1       |
| ø8                          | ø10                        | KQG2R08-10 | 14 | 41.9 | 24.9 | 16.1 | 26.1                                    | 18.3       |
| ø10                         | ø12                        | KQG2R10-12 | 17 | 44.8 | 26.2 | 17   | 41.5                                    | 26.5       |
| ø12                         | ø16                        | KQG2R12-16 | 19 | 42.9 | 22.1 | 18.6 | 58.3                                    | 35.4       |

Note) Value of FEP tubing.

