

Inch-size One-touch Fittings

Series KQ2

Applicable Tubing: Inch Size
Connection Thread: UNF, NPT

How to Order

KQ 2 H 05 — 34 S

One-touch fittings

Product's color

| Symbol | Body | Release button |
|--------|-------|----------------|
| 2 | White | Orange |
| Nil | Black | Red |

Applicable tubing O.D.

| | |
|----|------|
| 01 | 1/8 |
| 03 | 5/32 |
| 05 | 3/16 |
| 07 | 1/4 |
| 09 | 5/16 |
| 11 | 3/8 |
| 13 | 1/2 |

Port size/Applicable tubing O.D.

| Thread connection | Port size/Applicable tubing O.D. |
|-------------------|----------------------------------|
| 32 | 10-32 UNF |
| 33 | NPT 1/16 |
| 34 | NPT 1/8 |
| 35 | NPT 1/4 |
| 36 | NPT 3/8 |
| 37 | NPT 1/2 |
| 00 | Same dia. tubing |
| 99 | Same dia. rod |
| 01 | 1/8 tubing |
| 03 | 5/32 tubing |
| 05 | 3/16 tubing |
| 07 | 1/4 tubing |
| 09 | 5/16 tubing |
| 11 | 3/8 tubing |
| 13 | 1/2 tubing |

With thread seal

| | |
|-----|------------------|
| Nil | None |
| S | With thread seal |

Note) Port size with seal: Only
NPT 1/16
NPT 1/8
NPT 1/4
NPT 3/8
NPT 1/2

Model

| | |
|----|--|
| H | Male connector |
| | Straight |
| | Different dia. straight * |
| S | Hexagon socket head male connector * |
| F | Female union * |
| L | Male elbow |
| | Elbow |
| | Plug-in elbow |
| | Reducer elbow |
| K | 45° male elbow * |
| V | Universal male elbow * |
| VS | Hexagon socket head universal male elbow * |
| VF | Universal female elbow * |
| LF | Female elbow * |
| VD | Double universal male elbow * |
| VT | Tripple universal male elbow * |
| Z | Branch universal male elbow * |
| ZD | Double branch universal male elbow * |
| ZT | Triple branch universal male elbow * |
| W | Extended male elbow |
| | Male branch tee |
| T | Union tee |
| | Different dia. tee * |
| TW | Cross union |
| Y | Male run tee * |
| | Branch "Y" |
| | Union "Y" |
| U | Plug-in "Y" |
| | Different dia. union "Y" * |
| X | Different dia. plug-in "Y" * |
| R | Plug-in reducer |
| E | Bulkhead union |
| | Bulkhead connector |
| LE | Bulkhead union elbow * |



* Available only for KQ2 (White color body).

K□

M□

H□

D□

MS

T□

VMG

Accessory

| Symbol | Name |
|------------|----------------|
| KQ2N | Nipple |
| | Reducer nipple |
| KQ2C | Tube cap |
| KQ2P (KQP) | Plug (Orange) |

Use the below part number to order the gasket for sealing 10-32 UNF thread.

Gasket for 10-32 UNF: M-10/32G

Series KQ2

Series KQ2: White body
Series KQ: Black body

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

KQ2: Orange

KQ : Red

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.

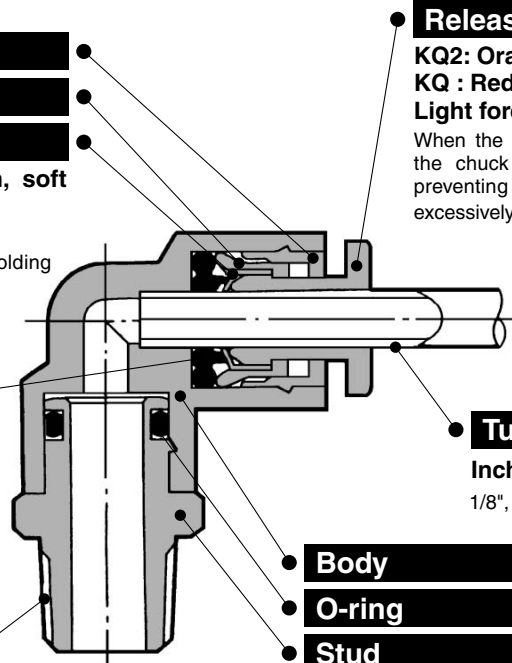
Seal

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.

Connection thread

UNF, NPT



Tube

Inch size

1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 1/2"

Body

O-ring

Stud

Effective when piping in a confined space.

The body and the threaded portion can rotate (for positioning to some extent).

PAT.



Product's Color


| Series | Body | Release button |
|------------|-------|----------------|
| Series KQ2 | White | Orange |
| Series KQ | Black | Red |

Applicable Tubing

| | |
|--------------------|---|
| Tubing material | Nylon, Soft nylon, Polyurethane |
| Tubing O.D. (inch) | ø1/8, ø5/32, ø3/16, ø1/4, ø5/16, ø3/8, ø1/2 |
























Specifications

| | | |
|-------------------------------|--|---|
| Fluid | Air/Water ^{Note)} | |
| Maximum operating pressure | 1.0 MPa | |
| Operating vacuum pressure | -100 kPa | |
| Proof pressure | 3.0 MPa | |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40°C (No freezing) | |
| Thread | Mounting section | ANSI/ASME B1.20.1-1983 (NTP thread) JIS B 0212 2A, Class 2B (UNF thread) |
| | Nut section | JIS B 0212 2A, Class 2B (UNF thread) |
| Seal (Thread portion) | With thread 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 | |
|--|---|
| Hex. socket head male connector KQ2S P. 13  Internal hex. allows thread connection by using an allen wrench for confined spaces. | Universal male elbow KQ2V P. 15  Universal male elbow allows thread connection by using a socket wrench for confined spaces. |
| 45° male elbow KQ2K P. 15  Use to pipe in 45° angle direction from female thread. Model in-between of male connector and male elbow. | Extended male elbow KQ2W P. 19  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. |
| Bulkhead union KQ2E P. 22  Use to connect tubes through a panel. | Bulkhead connector KQ2E P. 23  Use to connect male thread and tube through a panel. |
| Nipple KQ2N P. 23  Use to connect One-touch fittings. | Reducer nipple KQ2N P. 23  Use to connect One-touch fittings that are different tubing O.Ds. |
| Male connector KQ2H P. 13  Use to pipe in the same direction from female thread. Most general style. | Hexagon socket head universal male elbow KQ2VS P. 15  Hex. on the top allows thread connection by using an allen wrench for confined spaces. |
| Female connector KQ2F P. 13  Use to pipe from male thread such as pressure gauge. | Universal female elbow KQ2VF P. 16  Use to branch line in the same direction or at right angles from male or female thread. Multiplex connection possible. |
| Straight union KQ2H P. 14  Use to connect tubes in the same direction. | Female elbow KQ2LF P. 16  Use to pipe at right angles to male thread. |
| Different diameter straight KQ2H P. 14  Use to connect different sized tubes. | Double universal male elbow KQ2VD P. 16  Use to branch line at right angles to female thread. Two individual parts rotate 360°. |
| Male elbow KQ2L P. 14  Use to pipe at right angles to female thread. Most general style. | Triple universal male elbow KQ2VT P. 17  Use to three-branch line at right angles from female thread. Three individual parts rotate 360°. |
| | Branch universal male elbow KQ2Z P. 17  Hexagonal head allows thread connection by using a box wrench. Use for branch connection. |
| | Double branch universal male elbow KQ2ZD P. 17  Use to four-branch line at right angles from female thread. Two individual parts rotate 360°. |
| | Triple branch universal male elbow KQ2ZT P. 18  Use to six-branch line at right angles from female thread. Three individual parts rotate 360°. |
| | Union elbow KQ2L P. 18  Use to connect tubes at right angles. |
| | Plug-in elbow KQ2L P. 18  Use to change by 90° in a tube fetching direction from One-touch fittings and to size down. |

- K
- M
- H
- D
- MS
- T
- VMG

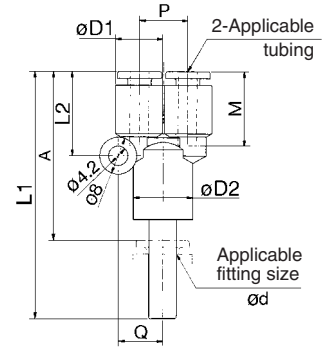
Series KQ2

Different Diameter Plug-in “Y”: KQ2X



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd | Model | Note) ϕD | L1 | L2 | A | P | Q | M | Min. port size | Weight (g) |
|-------------------------------|----------------------------------|-----------|----------------|------|------|------|------|------|------|----------------|------------|
| 1/8 | 5/32 | KQ2X01-03 | 10.4 | 51.5 | 18 | 35.5 | 10.4 | 9.7 | 15.5 | 2.5 | 5 |
| 5/32 | 3/16 | KQ2X03-05 | 11.4 | 56 | 20.5 | 39.5 | 11.4 | 10.6 | 16 | 3.5 | 10 |
| 3/16 | 1/4 | KQ2X05-07 | 13.2 | 56.5 | 21.5 | 39.5 | 13.2 | 12 | 16.5 | 4.6 | 9 |
| 1/4 | 5/16 | KQ2X07-09 | 15.2 | 64.5 | 24.5 | 46 | 15.2 | 13.7 | 17 | 6 | 21 |

Note) ϕD : Max. diameter

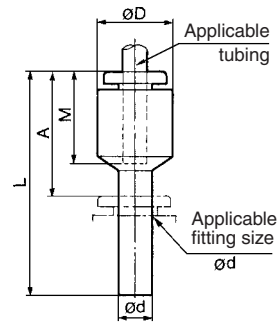


Plug-in Reducer: KQ2R



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) ϕD | L | A | M | Min. port size | Weight (g) |
|-------------------------------|---|-----------|----------------|------|------|------|----------------|------------|
| 1/8 | 5/32 | KQ2R01-03 | 9.6 | 34.5 | 18.5 | 15.5 | 2.5 | 2 |
| | 3/16 | KQ2R01-05 | 9.2 | 34 | 17.5 | | | 7 |
| | 1/4 | KQ2R01-07 | | | 17 | | | 9 |
| 5/32 | 3/16 | KQ2R03-05 | 10 | 34 | 17.5 | 16 | 3 | 8 |
| | 1/4 | KQ2R03-07 | 10.4 | 34.5 | 17.5 | | | 9 |
| 3/16 | 1/4 | KQ2R05-07 | 11.4 | 34.5 | 18.5 | 16.5 | 3.5 | 4 |
| | 5/16 | KQ2R05-09 | 10.7 | 36.5 | 18 | | | 14 |
| 1/4 | 5/16 | KQ2R07-09 | 13.2 | 37 | 18.5 | 17 | 4.6 | 17 |
| | 3/8 | KQ2R07-11 | | 40 | 19.5 | | | 19 |
| | 1/2 | KQ2R09-13 | | 41 | 19 | | | 18.5 |
| 5/16 | 3/8 | KQ2R09-11 | 14 | 40 | 19 | 18.5 | 6 | 24 |
| 3/8 | 1/2 | KQ2R11-13 | 17.9 | 44 | 22 | 21 | 7 | 32 |
| | 5/8 | KQ2R11-13 | | | | | | 22 |

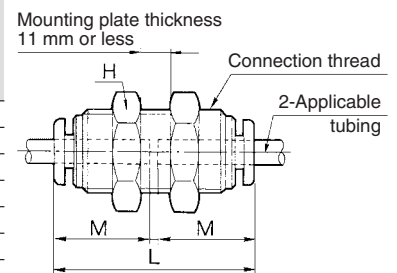
Note) ϕD : Max. diameter



Bulkhead Union: KQ2E



| Applicable tubing O.D. (inch) | Model | Connection thread UNF | H (Width across flats) | L | Mounting hole | M | Min. port size | Weight (g) |
|-------------------------------|-----------|-----------------------|------------------------|------|---------------|------|----------------|------------|
| 1/8 | KQ2E01-00 | 1/2-20 | 17.46 | 32.5 | 13.5 | 15.5 | 2.5 | 26 |
| 5/32 | KQ2E03-00 | 1/2-20 | 17.46 | 32.5 | 13.5 | 16 | 3 | 26 |
| 3/16 | KQ2E05-00 | 9/16-18 | 17.46 | 34 | 15 | 16.5 | 3.5 | 33 |
| 1/4 | KQ2E07-00 | 9/16-18 | 17.46 | 34.5 | 15 | 17 | 4.6 | 33 |
| 5/16 | KQ2E09-00 | 3/4-16 | 22.23 | 38 | 20 | 18.5 | 6 | 52 |
| 3/8 | KQ2E11-00 | 7/8-14 | 25.4 | 42.5 | 23 | 21 | 7 | 70 |
| 1/2 | KQ2E13-00 | 1-12 | 28.6 | 44.5 | 26 | 22 | 9.6 | 97 |

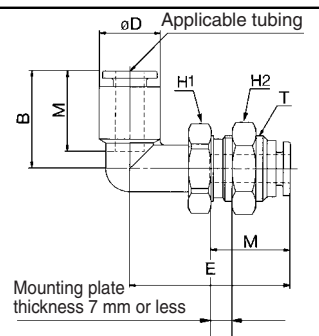


Bulkhead Male Elbow: KQ2LE



| Applicable tubing O.D. (inch) | Model | T | H1 (Width across flats) | H2 (Width across flats) | B | E | Note) ϕD | Mounting hole | M | Min. port size | Weight (g) |
|-------------------------------|------------|-------------|-------------------------|-------------------------|------|------|----------------|---------------|------|----------------|------------|
| 1/8 | KQ2LE01-00 | 1/2-20 UNF | 17.46 | 17.46 | 17.5 | 31 | 9.6 | 13.5 | 15.5 | 2.5 | 27 |
| 5/32 | KQ2LE03-00 | 1/2-20 UNF | 17.46 | 17.46 | 18 | 31 | 10.4 | 13.5 | 16 | 3 | 26 |
| 3/16 | KQ2LE05-00 | 9/16-18 UNF | 17.46 | 17.46 | 19.5 | 34.5 | 11.4 | 15 | 16.5 | 3.5 | 32 |
| 1/4 | KQ2LE07-00 | 9/16-18 UNF | 17.46 | 17.46 | 20.5 | 35 | 13.2 | 15 | 17 | 4.6 | 29 |
| 5/16 | KQ2LE09-00 | 3/4-16 UNF | 22.23 | 22.23 | 23.5 | 38.5 | 15.2 | 20 | 18.5 | 6 | 53 |
| 3/8 | KQ2LE11-00 | 7/8-14 UNF | 25.4 | 25.4 | 25.5 | 43 | 17.9 | 23 | 21 | 7 | 85 |
| 1/2 | KQ2LE13-00 | 1-12 UNF | 28.6 | 28.6 | 28 | 46 | 21.7 | 26 | 22 | 9.6 | 105 |

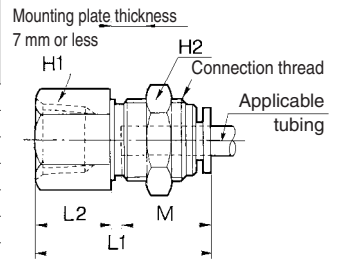
Note) ϕD : Max. diameter



Bulkhead Connector: KQ2E



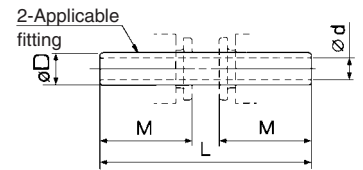
| Applicable tubing O.D. (inch) | Connection thread NPT | Model | Connection thread UNF | H1 (Width across flats) | H2 (Width across flats) | L1 | L2 | M | Min. port size | Mounting hole | Weight (g) |
|-------------------------------|-----------------------|------------------|-----------------------|-------------------------|-------------------------|------|------|------|----------------|---------------|------------|
| 1/8 | 1/4 | KQ2E01-35 | 1/2 -20 | 17.46 | 17.46 | 31 | 15 | 15.5 | 2.5 | 13.5 | 36 |
| 5/32 | 1/4 | KQ2E03-35 | 1/2 -20 | 17.46 | 17.46 | 31 | 15 | 16 | 3 | 13.5 | 36 |
| 3/16 | 1/8 | KQ2E05-34 | 9/16-18 | 17.46 | 17.46 | 28 | 10 | 16.5 | 3.5 | 15 | 34 |
| 1/4 | 1/4 | KQ2E07-35 | 9/16-18 | 17.46 | 17.46 | 32.5 | 14.5 | 17 | 4.6 | 15 | 34 |
| 5/16 | 3/8 | KQ2E09-36 | 3/4 -16 | 22.23 | 22.23 | 35 | 15 | 18.5 | 6 | 20 | 52 |
| 1/2 | 3/8 | KQ2E11-36 | 7/8 -14 | 25.4 | 25.4 | 37 | 14.5 | 21 | 7 | 23 | 96 |
| | 1/2 | KQ2E13-37 | 1-12 | 28.6 | 28.6 | 37 | 14 | 22 | 9.6 | 26 | 125 |
| | | | | | | 41.5 | 18 | | | | 128 |



Nipple: KQ2N



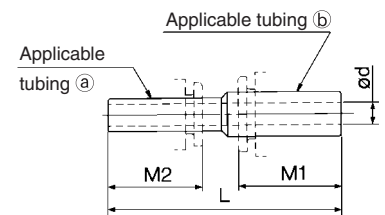
| Applicable fitting ϕD | Model | L | M | ϕd | Weight (g) |
|-----------------------------|------------------|----|------|----------|------------|
| 1/8 | KQ2N01-99 | 36 | 15.5 | 2.2 | 0.2 |
| 3/16 | KQ2N05-99 | 38 | 16.5 | 3.5 | 0.4 |
| 1/4 | KQ2N07-99 | 39 | 17 | 4.6 | 1 |
| 3/8 | KQ2N11-99 | 49 | 21 | 7.5 | 10 |
| 1/2 | KQ2N13-99 | 51 | 22 | 10 | 15 |



Reducer Nipple: KQ2N



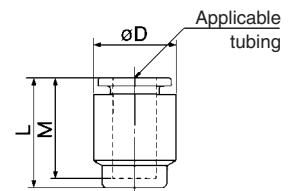
| Applicable tubing O.D. (inch) | Model | | L | M1 | M2 | ϕd | Weight (g) |
|-------------------------------|-------|------------------|------|------|------|----------|------------|
| | (a) | (b) | | | | | |
| 1/8 | 5/32 | KQ2N01-03 | 36.5 | 16 | 15.5 | 2.2 | 0.2 |
| | 3/16 | KQ2N01-05 | 37 | 16.5 | | | |
| 5/32 | 3/16 | KQ2N03-05 | 37.5 | 16.5 | 16 | 2.5 | 0.4 |
| | 1/4 | KQ2N03-07 | 38 | 17 | | | |
| 3/16 | 1/4 | KQ2N05-07 | 38.5 | 17 | 16.5 | 3.5 | 0.6 |
| | 5/16 | KQ2N05-09 | 41 | 18.5 | | | |
| 1/4 | 5/16 | KQ2N07-09 | 41.5 | 18.5 | 17 | 4.6 | 1 |
| | 3/8 | KQ2N07-11 | 45 | 21 | | | |
| 5/16 | 3/8 | KQ2N09-11 | 46.5 | 21 | 18.5 | 6 | 11 |
| | 1/2 | KQ2N09-13 | 47.5 | 22 | | | |
| 3/8 | 1/2 | KQ2N11-13 | 50 | 22 | 21 | 7 | 24 |



Tube Cap: KQ2C



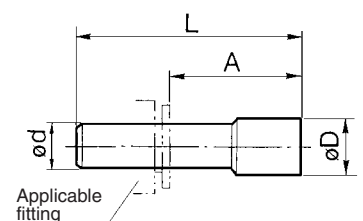
| Applicable tubing O.D. (inch) | Model | $\phi D1$ | L | M | Weight (g) |
|-------------------------------|------------------|-----------|------|------|------------|
| 5/32 | KQ2C03-00 | 10.4 | 17 | 16 | 1 |
| 1/4 | KQ2C07-00 | 13.2 | 18 | 17 | 2 |
| 5/16 | KQ2C09-00 | 15.2 | 20.5 | 18.5 | 3 |
| 3/8 | KQ2C11-00 | 17.9 | 22.5 | 21 | 6 |



Plug: KQ2P, KQP



| Applicable fitting size ϕd (inch) | Model ^{Note)} | | ϕD | L | A | Weight (g) |
|---|------------------------|---------------|----------|------|------|------------|
| 1/8 | KQ2P-01 | KQP-01 | 5 | 31.5 | 16 | 1 |
| 5/32 | KQ2P-03 | KQP-03 | 6 | 32 | 16 | 1 |
| 3/16 | KQ2P-05 | KQP-05 | 6.8 | 34 | 17.5 | 1 |
| 1/4 | KQ2P-07 | KQP-07 | 8.5 | 35 | 18 | 1 |
| 5/16 | KQ2P-09 | KQP-09 | 10 | 39 | 20.5 | 2 |
| 3/8 | KQ2P-11 | KQP-11 | 11.5 | 43 | 22 | 3.5 |
| 1/2 | KQ2P-13 | KQP-13 | 15 | 46 | 24 | 5 |



- K
- M
- H
- D
- MS
- T
- VMG